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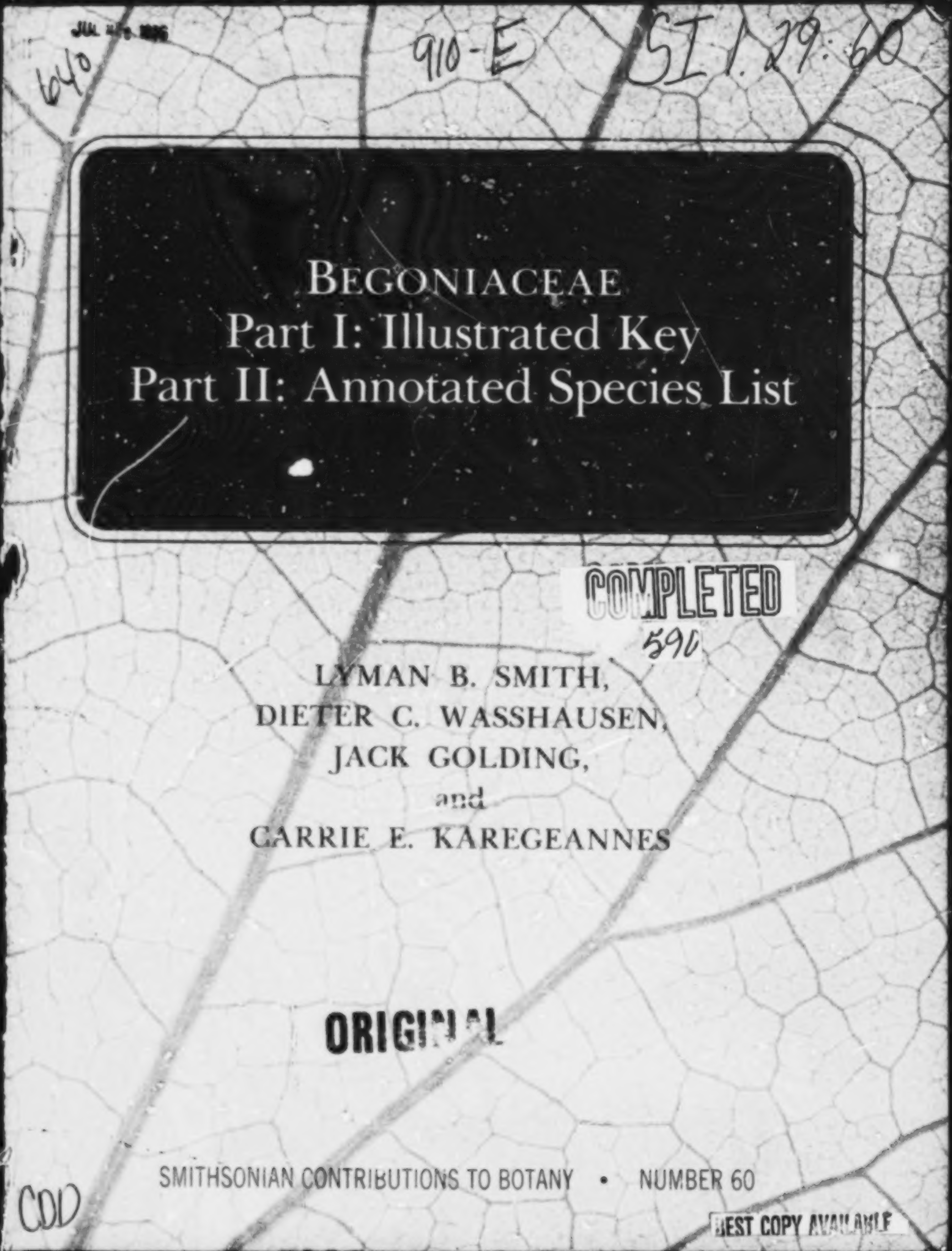

BEGONIACEAE

Part I: Illustrated Key
Part II: Annotated Species List

COMPLETED
590

LYMAN B. SMITH,
DIETER C. WASSHAUSEN,
JACK GOLDING,
and
CARRIE E. KAREGEANNES

ORIGINAL

SMITHSONIAN CONTRIBUTIONS TO BOTANY • NUMBER 60

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Robert McC. Adams
Secretary
Smithsonian Institution

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BEGONIACEAE
Part I: Illustrated Key
Part II: Annotated Species List

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ABSTRACT

Smith, Lyman B., Dieter C. Wasshausen, Jack Golding, and Carrie E. Karegeannes. **BEGONIACEAE**, Part I: Illustrated Key; Part II: Annotated Species List. *Smithsonian Contributions to Botany*, number 60: 584 pages, 1183 figures, 1986.—In Part I, all known taxa of Begoniaceae (exclusive of hybrids and cultivars) are initially keyed into 34 subkeys and are subsequently keyed to all recognized species, with each species illustrated from a photo of the holotype or type specimen. Part II lists, in alphabetical order, all verified species and varietal epithets, including complete synonymy, literature citations, and geographical distribution. All the recognized species are cross referenced to the subkeys in Part I by the illustration numbers.

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BEGONIACEAE, Part I: Illustrated Key

Lyman B. Smith and Dieter C. Wasshausen

Introduction

The last survey of Begoniaceae to include all known species was that of A. DeCandolle in his *Prodromus* in 1864. It had brief descriptions of 380 species, organized into American, Asian, and African groups of sections. The sections were keyed within each geographic area and the larger sections were divided by headings between the descriptions. The arrangement was taxonomic and many descriptions of species lacked the necessary floral or fruit characters to place them in sections.

Since 1864 over 1000 species have been proposed, many without any relation to previous ones. We found the problem of verifying new species and writing regional floras more and more difficult, but we lacked the time to monograph the family. Consequently we wrote an illustrated key to all natural species. We believe that a key is for identification primarily and thus have based our key on blade-shape, habit, and inflorescence in that order.

Our first objective was to separate the American species from those of the Old World. We did not pretend to do more with the Old World species than to take the descriptions at face value and illustrate as many as possible. We have been greatly helped in locating the African material by J.J.F.E. deWilde of Wageningen, Netherlands.

In the American species, we benefited from copious material and considerable experience with regional floras. Much good work has been done on both taxonomy and nomenclature in the preparation of the "Annotated Species List" part of this work by Jack Golding and Carrie Karegeannes.

THE KEY

Construction: We have chosen an indented form of key because we are more familiar with its construction and use and because we believe that it is more efficient in separating large groups of species at a time. The bracket key, in contrast, has a tendency to separate one species at a time, and as that is the most specialized, the common and most generalized species arrives at the end of the key after a maximum of work. The indented key must separate large groups, or it will quickly move across the page, and so our key is divided initially into 34 subkeys, each beginning at the left margin of the page and thus saving space. Because the key is artificial, the order of species doesn't matter, and so we generally place the smaller arm of a dichotomous pair first.

Secondary Characters: After the preliminary breakdown by blade-shape, habit, and inflorescence, there remain a few uncomfortably large groups of species, and so it is necessary to break further in order to make workable subkeys. Whether the petioles are vestite or not is not readily verifiable in the illustrations, but it is a character that is almost always noted in descriptions. Similarly, whether the staminate tepals are

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2 or more than 2 (usually 4) is more often found in descriptions than any character of the pistillate flowers or fruit, because the staminate flowers are showier and more often collected. Tepal number and petiole indument are also very convenient to use within most of the subkeys not already separated by them. As we progress within the subkeys, characters of flower and fruit, by necessity, are used more.

Multiple Entries: The great advantage of an artificial key is that its statements are simple and thus avoid the legalistic backing and filling necessary in breaking off phylogenetically related groups in taxonomic keys. The multiple entries are of two types. In type one, the species straddles the key by having characters on both sides of a couplet, as when, for instance, it has both peltate and non-peltate leaf-blades. In type two, we know that the species comes to that couplet dichotomy but we do not know under which arm it belongs. Other species under each arm of the couplet have the proper characters. The species whose character trait is unknown is placed under both arms, with a question mark in front of it. For instance, we might know that all the other species showed 2 or 4 staminate tepals but this showed none.

Some species have been keyed out together in the same couplet half because it was impossible to further separate them with the data given in their descriptions. In some of these instances, dates are given to show priority.

Synonyms: In some couplets, synonyms (in parentheses) are included to indicate illegitimate names of doubtful taxonomic standing for which the authors did not wish to propose new names.

Geography: Although our design is to be completely independent of the source areas of species, ranges provide convenient additional information while using the key. They help to confirm a determination or give an indication of probable paths to follow in the key when either a key species or a specimen to be identified lacks key characters. For China and Brazil we have subdivided more narrowly into provinces and states, respectively.

Place names are generally given as quoted from original sources; no attempt was made to change them to their current equivalents.

Other Marking: The few species known originally from cultivation are marked with an asterisk, regardless of whether they can still be found there.

ILLUSTRATIONS

So far as possible the illustrations are from photos of holotype or type specimens. In the case of the leaf-blades, the old bromide "one picture is worth a thousand words" is particularly apt because differences that are difficult to describe clearly are visible at a glance. The terms "obtuse" and "acuminate" are cases in point. "Obtuse" as used in botany is "blunt" or "narrowly rounded" not "angle broader than a right angle" of our old plane geometry days. "Acuminate" is not "attenuate," though often so used botanically, but is "abruptly contracted to a long slender apex," the "drip tip" of many rainforest trees.

Where type specimens are lacking or in poor shape, we have resorted first to specimens that we believe are correctly identified or, second, to plates and figures. For figures especially, reproduction of the finer lines is a problem that we have solved by thickening them in various ways and with suitable indication in the references in the "Begoniaceae Species List."

Because of the expense of printing over 1000 illustrations, we have had to group four figures on a page, which still shows leaf-blade detail sufficiently well. However, the pictures are badly proportioned to the page size of the publication, being too tall and narrow, and so the legends must be held to a minimum, thus:

1.1, *B. crassicaulis*; 1.2, *B. parodiana*; 1.3, *B. erythrocarpa*; 1.4, *B. compacticaulis.*

The figures are arranged consecutively from left to right and top to bottom on each page of illustrations and are grouped to approximate the first appearance of the illustrated species in the subkeys. Each figure number represents first the subkey and then numerically the approximate appearance of the species in that subkey (e.g., 26.3 = subkey 26, approximately third species keyed out).

Supplemental figures were selected after the original figures had been numbered; they are denoted by the prefix "S" (e.g., S1). This device avoided renumbering the rest of figures and their references. Supplemental figures appear at the back of the book, following the originally selected figures.

ACKNOWLEDGMENTS

We give thanks to the directors of the following herbaria for the privilege of examining their specimens or photographs thereof:

A	Arnold Arboretum of Harvard University, Cambridge, Massachusetts
AAU	University of Aarhaus, Risskov, Denmark
ABD	The University, Aberdeen, Scotland, Great Britain
BM	British Museum (Natural History), London
BR	Jardin botanique national de Belgique, Brussels, Belgium
C	Botanical Museum and Herbarium, Copenhagen, Denmark
CAM	St. John's College, Cambridge, Great Britain
CGE	University of Cambridge, Cambridge, Great Britain
E	Royal Botanic Garden, Edinburgh, Scotland, Great Britain
F	Field Museum of Natural History, Chicago
FI	Herbarium Universitatis Florentinae, Instituto Botanico, Florence, Italy
G	Conservatoire et Jardin botaniques, Geneva, Switzerland
GH	Gray Herbarium of Harvard University, Cambridge, Massachusetts
GUA	Instituto de Conservação de Natureza, Rio de Janeiro, Brazil
HBG	Institut für Allgemeine Botanik, Hamburg, Germany
K	Royal Botanic Gardens, Kew, Great Britain
L	Rijksherbarium, Leiden, Netherlands
M	Botanische Staatssammlung, Munich, Germany
MA	Instituto "Antonio José Cavanilles," Jardin Botánico, Madrid, Spain
MO	Missouri Botanical Garden, St. Louis, Missouri
NY	New York Botanical Garden
P	Museum National d'Histoire Naturelle, Paris
PNH	Philippine National Herbarium, Manila, Philippines
RB	Jardim Botânico do Rio de Janeiro, Brazil
S	Naturhistoriska Riksmuseet, Stockholm, Sweden
SING	Botanic Garden, Republic of Singapore
SP	Instituto de Botânica São Paulo, Brazil
UC	University of California, Berkeley
US	United States National Herbarium, Smithsonian Institution
W	Naturhistorisches Museum, Vienna, Austria
WAG	Laboratory for Plant Taxonomy and Plant Geography, Wageningen, Netherlands
—	Ziesenhenne, Rudolf, Santa Barbara, California, private herbarium

Artificial Key to the Species of Begoniaceae

1. Flowering plant leafless . . . . Subkey 1 (p. 5)
1. Flowering plant foliaceous.
 2. Blades peltate.
  3. Leaves solitary or fasciculate . . . . Subkey 2 (p. 5)
  3. Leaves separated by distinct internodes . . . . Subkey 3 (p. 8)
 2. Blades basifixed.
  4. Blades divided or strongly lobed.
   5. Nerves digitate; blades mostly ovate and broadest below the middle.
    6. Inflorescence dichotomous at base (exclusive of pedicels) . . . . Subkey 4 (p. 13)
    6. Inflorescence with a simple axis or essentially none (exclusive of pedicels), the primary branches often dichotomously branched . . . . Subkey 5 (p. 17)
   5. Nerves pinnate; blades mostly broadest near the middle . . . . Subkey 6 (p. 19)
  4. Blades shallowly lobed to entire.
   7. Blades straight with the midnerve continuing the direction of the petiole.
    8. Nerves digitate; blades mostly ovate and broadest below the middle or orbicular or reniform.
     9. Leaves solitary or fasciculate.

10. Blades orbicular or reniform, mostly without a distinct apex . . . . Subkey 7 (p. 21)
10. Blades ovate with the central nerve longer than the others . . . . Subkey 8 (p. 22)
9. Leaves separated by distinct internodes.
11. Stem repent or scandent . . . . Subkey 9 (p. 26)
11. Stem erect.
12. Blade rounded and without a distinct apex . . . . Subkey 10 (p. 28)
12. Blade with a distinct apex.
13. Apex symmetric . . . . Subkey 11 (p. 30)
13. Apex asymmetric . . . . Subkey 12 (p. 32)
8. Nerves pinnate; blades mostly broadest near the middle.
14. Leaves solitary or fasciculate . . . . Subkey 13 (p. 35)
14. Leaves separated by distinct internodes.
15. Stem repent or scandent . . . . Subkey 14 (p. 36)
15. Stem erect.
16. Blades symmetric . . . . Subkey 15 (p. 41)
16. Blades asymmetric.
17. Blades generally inequilateral . . . . Subkey 16 (p. 42)
17. Blades strongly asymmetric at base.
18. Blades dimidiate, one side decurrent on the petiole.
19. Inflorescence with a simple axis or none (excluding pedicels), non-dichotomous. . .
. . . . Subkey 17 (p. 46)
19. Inflorescence basally dichotomous (excluding pedicels) . . . . Subkey 18 (p. 49)
18. Blades not dimidiate.
20. Inflorescence dichotomous at base (excluding pedicels).
21. Petioles vestite . . . . Subkey 19 (p. 52)
21. Petioles glabrous . . . . Subkey 20 (p. 55)
20. Inflorescence with a central axis or none (excluding pedicels) . . . Subkey 21 (p. 59)
7. Blades oblique or transverse with the midnerve making a distinct angle with the petiole.
22. Leaves solitary or fasciculate (herbarium specimens with large detached leaves usually belong here).
23. Staminate tepals 2 . . . . Subkey 22 (p. 65)
23. Staminate tepals 3 or more, usually 4.
24. Inflorescence with a simple axis or none (exclusive of pedicels), non-dichotomous . . . . .
. . . . Subkey 23 (p. 69)
24. Inflorescence dichotomous at base . . . . Subkey 24 (p. 72)
22. Leaves separated by distinct internodes.
25. Stems repent or pendent (*B. pensilis*).
26. Staminate tepals 2 . . . . Subkey 25 (p. 79)
26. Staminate tepals 3 or more, usually 4 . . . . Subkey 26 (p. 82)
25. Stems erect, at least the flowering.
27. Inflorescence with a central axis or none (exclusive of pedicels).
28. Blades at least twice as long as wide . . . . Subkey 27 (p. 88)
28. Blades less than twice as long as wide . . . . Subkey 28 (p. 93)
27. Inflorescence basally dichotomous or rarely more divided.
29. Blades at least twice as long as wide.
30. Petioles vestite . . . . Subkey 29 (p. 101)

30. Petioles glabrous or glabrescent . . . . Subkey 30 (p. 105)
29. Blades less than twice as long as wide.
31. Petioles vestite.
32. Bracts persistent . . . . Subkey 31 (p. 112)
32. Bracts deciduous . . . . Subkey 32 (p. 115)
31. Petioles glabrous or glabrescent.
33. Staminate tepals 2 . . . . Subkey 33 (p. 121)
33. Staminate tepals 3 or more, usually 4 . . . . Subkey 34 (p. 124)

Subkey 1

1. Inflorescence amply dichotomous, many-flowered; tepals glabrous; plant caulescent.
2. Staminate tepals 2; inflorescence asymmetrically dichotomous. Guatemala. [Fig. 1.1] . . . . ***B. crassicaulis***
2. Staminate tepals 4.
3. Stem erect from a tuberous base; internodes short; peduncle terminal. Argentina. [Fig. 1.2] . . . . ***B. parodiana***
3. Stem prostrate or subscandent.
4. The stem gray-crustose, to 4 m long, subscandent on low vegetation, hollow; internodes long; peduncles lateral; capsule-wings very unequal. Ecuador to Bolivia. [Fig. 1.3] ***B. erythrocarpa***
4. The stem not crustose, short, prostrate; internodes short; peduncle terminal; capsule-wings subequal, all narrowly crescentiform. Ecuador. [Fig. 1.4] . . . . ***B. compacticaulis***
1. Inflorescence not more than once dichotomous or subracemose, few-flowered leaves terminal.
5. Staminate tepals 10–12, narrow, the outer vestite. Peru. [Fig. 1.5] . . . . ***B. anemoniflora***
5. Staminate tepals 4.
6. Outer staminate tepals glabrous. Ecuador. [Fig. 1.6] . . . . ***B. parcifolia***
6. Outer staminate tepals vestite. India . . . . ***B. orchidiflora***

Subkey 2

1. Inflorescence dense or with a central axis, not basally and laxly dichotomous (excluding pedicels).
2. Axis of the inflorescence elongate, exceeding the petioles.
3. Staminate tepals 4.
4. Blades 33–55 cm long, stellate-lepidote. Brazil: Espírito Santo . . . . ***B. kautskyana***
4. Blades to 3 cm long, glabrous. Siam. [Fig. S1] . . . . ***B. pumilio***
3. Staminate tepals 2.
5. Inflorescence simple, racemose; blades coarsely dentate; stamens 4–5; capsule-wings strongly unequal. Madagascar. [Fig. 2.1] . . . . ***B. decaryana***
5. Inflorescence compound; capsule-wings equal or slightly unequal.
6. Blades subentire, broadly rounded at base. Central America: Costa Rica, Panama. [Fig. 2.2] . . . . ****B. conchifolia***
6. Blades strongly cut, cordate or subcordate.
7. Blades basally subcordate, doubly serrate. Mexico. [Fig. 2.3] . . . . ***B. polygonata***
7. Blades laterally cordate, lobate-dentate. Guatemala, probably not a natural species. [Fig. 2.4] . . . . ?****B. lindleyana***
2. Axis of the inflorescence very short; inflorescence dense or umbellate or subumbellate (including the pedicels), staminate tepals 2. West Africa.

8. Blades bullate, entire or subentire.
9. Inflorescence exceeding the leaves; petioles glabrous; capsule exalate; tepals yellow. Nigeria. [Fig. 2.5] .... ***B. ficicola***
9. Inflorescence about equaling the leaves or shorter; petioles vestite. Cameroon.
10. Blades weakly undulate; ovary verrucose, exalate. [Fig. 2.6] .... ***B. microsperma***
10. Blades dentate.
11. Petioles shorter than the subacute blades; ovary vestite; capsule alate. [Fig. 2.7] .... ***B. lacunosa***
11. Petioles longer than the acuminate blades; ovary glabrous; capsule exalate or narrowly alate; tepals yellow. [Fig. 2.8] .... ***B. staudtii***
8. Blades even (at least not noted as bullate).
12. Blades distinctly cut, dentate, serrate, or crenate.
13. Capsules exalate or prismatic and very narrowly alate. Cameroon.
14. Blades broadly dentate on the upper half; capsules prismatic and very narrowly alate if at all. [Fig. 2.9] .... ***B. schaeferi***
14. Blades serrate throughout; capsules exalate; petioles shorter than the oblique blades.
15. Blades elliptic-ovate. [Fig. 2.10] .... ***B. schlechteri***
15. Blades broadly obovate or oblong-ovate. [Fig. 2.11] .... ***B. laporteifolia***
13. Capsules strongly alate.
16. Umbo submarginal; blades obliquely linear-oblong or oblong-lanceolate. Gabon. [Fig. 2.12] .... ***B. hirsutula***
16. Umbo distant from margin.
17. Petioles glabrous, very long; blades ovate. Gabon. [Fig. 2.13] .... ***B. clypeifolia***
17. Petioles vestite, shorter than the blades; blades oblong-ovate, almost twice as long as wide.
18. Staminate tepals very unequal, one orbicular, the other oblong. Gabon. [Fig. 2.14] .... ***B. anisosepala***
18. Staminate tepals equal, orbicular or broader. Angola, Congo. [Fig. 2.15] .... ***B. mayombensis***
12. Blades entire or subentire, sometimes slightly undulate.
19. Capsules exalate. Cameroon.
20. Petioles densely vestite with long, flat trichomes; capsule subglobose, subterranean .... ***B. hypogaea***
20. Petioles glabrous or subglabrous; capsule elongate, supraterranean; umbo submarginal. Gabon. [Fig. 2.16] .... ***B. scutifolia***
19. Capsules alate; petioles mostly longer than the blades.
21. Nerves glabrous beneath; capsules subglobose, 3–4-angled.
22. Blades glandular-puberulent above; tepals bicolorous, one yellow, the other red. Congo. [Fig. 2.17] .... ***B. gentilii***
22. Blades glabrous above; tepals uniformly yellow or orange.
23. Umbo submarginal; blades 0.7–3.5 cm long; tepals 4–5 mm long. Congo. [Fig. 2.18] .... ***B. vankerckhovenii***
23. Umbo at least 1 cm above base of blade; blades 7–18 cm long; tepals 6–12 mm long. Congo north to Sierra Leone and Guinea. [Fig. 2.19] .... ***B. quadrialata***
21. Nerves vestite beneath.
24. Indument setose. Gabon. (1871). [Fig. 2.20] .... ***B. scutulum***

Cameroon. (1921) .... ***B. calophylla***
24. Indument of fine hairs.
25. Ovary slender; umbo at least 1 cm above base of blade; blades 7–18 cm long; tepals 6–12 mm long. Congo north to Sierra Leone and Guinea. [Fig. 2.19] ... ***B. quadrialata***
25. Ovary broad.
26. Blades pubescent on both sides. Congo, Cameroon, Gabon. [Fig. 2.21] .... ***B. potamophila***
26. Blades glabrous above. Congo, Sierra Leone, Liberia, Nigeria .... ***B. calabarica***
1. Inflorescence basally dichotomous or more divided.
27. Petioles glabrous or their indument sparse, inconspicuous, or evanescent.
28. Umbo submarginal; blade-base subcordate.
29. Blades without an acuminate apex.
30. Inflorescence many-flowered; blades even, 5–15 cm wide. India. [Fig. 2.22] .... ****B. albo-coccinea***
30. Inflorescence 2-flowered; blades strongly reticulate, 5 cm wide. Borneo. [Fig. S2] .... ***B. speluncae***
29. Blade ovate with acuminate apex, sometimes lobed. Nepal. [Fig. 2.23] .... ***B. rubella***
28. Umbo far from margin; blade-base broadly rounded.
31. Ovary 2-celled; plant glabrous.
32. Inflorescence unilateral. Malaya. [Fig. 2.24] .... ***B. kingiana***
32. Inflorescence regularly dichotomous.
33. Philippines. [Fig. 2.25] .... ***B. hernandioides***
33. China: Hainan. [Fig. 2.26] .... ***B. peltatifolia***
31. Ovary 3-celled.
34. Placentas bilamellate. America.
35. Staminate tepals 2. Mexico to Colombia. [Fig. 2.27] .... ***B. nelumbiifolia***
35. Staminate tepals 4. Ecuador. [Fig. 2.28] .... ***B. serotina***
34. Placentas simple. Southeast Asia, East Indies.
36. Blades bullate. Sumatra. [Fig. 2.29] .... ****B. goegoensis***
36. Blades flat, even.
37. Blades laxly glandular-serrate. Java. [Fig. 2.30] .... ****B. coriacea***
37. Blades entire or subentire.
38. Apex of blade shallowly trilobate, obtuse. Siam. [Fig. 2.31] .... ***B. rabilii***
38. Apex of blade entire.
39. Blades acute. Philippines. [Fig. 2.32] .... ***B. tayabensis***
39. Blades broadly rounded and apiculate or acuminate.
40. Bracts long-ciliate; blades suborbicular, apiculate. Malaya. [Fig. 2.33] .... ****B. peninsulae***
40. Bracts glabrous; blades oblong-ovate, acuminate. China: Yunnan .... ***B. wangii***
27. Petioles notably vestite.
41. Umbo submarginal.
42. Blades deeply cut or lobed.
43. Blades subsymmetric, deeply lobed. Mexico. [Fig. 2.34] .... ***B. corzoensis***
43. Blades strongly asymmetric. Guatemala. species doubtfully natural. [Fig. 2.4] .... ?****B. lindleyana***
42. Blades minutely cut if at all.

44. Blades broadly rounded at base or very slightly and broadly indented.
  45. Blades subsymmetric. Burma. [Fig. 2.35] . . . . ***B. subperfoliata***
  45. Blades strongly oblique. Malaya. [Fig. 2.36] . . . . ***B. eiromischa***
44. Blades subcordate at base with overlapping lobes. East Indies.
  46. Bracts suborbicular to obovate, ciliate. Java . . . . ***?B. lobbii***
  46. Bracts elliptic, acute, pilose. Java, Sumatra, Borneo. [Fig. 2.37] . . . . ***B. mollis***
41. Umbo distant from blade-margin.
  47. Blades densely long-ciliate. East Indies.
    48. Blades bullate. Sumatra. [Fig. 2.38] . . . . ***B. sudjanae***
    48. Blades flat, even. Philippines. [Fig. 2.39] . . . . ***B. rufipila***
  47. Blades inconspicuously ciliate if at all.
    49. Trichomes stellate. Brazil.
      50. Staminate tepals 2. Bahía. [Fig. 2.40] . . . . ***B. fellererana***
      50. Staminate tepals 4. Rio de Janeiro . . . . ***B. santos-limae***
    49. Trichomes simple.
      51. Staminate tepals 2.
        52. Inflorescence irregular; capsule-wings slightly unequal. Central America. [Fig. 2.2] . . . . ****B. conchifolia***
        52. Inflorescence regularly dichotomous.
          53. Capsule-wing single, falcate; blades obtusely angled, to 10 cm long. Central America: Guatemala, El Salvador. [Fig. 2.41] . . . . ***B. calderonii***
          53. Capsule-wings 3; blades evenly rounded except for the apex.
            54. Mature blades duplicate-serrate, emarginate and plicate at base. Ecuador. [Fig. 2.42] . . . . ***B. asympeltata***
            54. Mature blades entire, broadly rounded at base and flat; staminate tepals 2.
              55. Stipules glabrous, broadly oblong; capsule-wings truncate above. Philippines . . . . ***B. elmeri***
              55. Stipules pilose, lanceolate; capsule-wings rounded above. Mexico to Colombia. [Fig. 2.27] . . . . ***B. nelumbiifolia***
      51. Staminate tepals 4.
        56. Blades evenly vestite beneath.
          57. Mature blades with a single basal lobe. Tropical America, doubtfully natural. [Fig. 2.43] . . . . ****B. sunorchis***
          57. Mature blades unlobed. Brazil: Rio de Janeiro.
            58. Blades pilose above. [Fig. 2.44] . . . . ***B. concinna***
            58. Blades glabrous above. [Fig. 2.45] . . . . ***B. peltifolia***
        56. Blades vestite principally on the nerves beneath.
          59. Outer tepals vestite. Brazil: São Paulo. [Fig. 2.46] . . . . ***B. paulensis***
          59. Outer tepals glabrous. Malaya.
            60. Petioles 2–3 times longer than the 6–7 cm long blades; fruiting pedicels 12–15 mm long. [Fig. 2.47] . . . . ***B. ignorata***
            60. Petioles about the same length as the blades; fruiting pedicels 50 mm long. [Fig. 2.33] . . . . ****B. peninsulae***

Subkey 3

1. Inflorescence dense or with a central axis, not basally and laxly dichotomous (excluding the pedicels).

2. Axis of the inflorescence elongate, exceeding the leaves.
3. Staminate tepals 2. America.
4. Blades broadly rounded at base, shallowly angulate-repand. Central America? [Fig. 3.1] . . . . *__B. sparsipila__
4. Blades subcordate at base, strongly double-serrate. Mexico.
5. Petioles bearing fimbriate rings of flat trichomes; capsule-wings equal [Fig. 3.2] . . . . *__B. manicata__
5. Petioles villous; capsule-wings unequal. [Fig. 2.3] . . . . *__B. polygonata__
3. Staminate tepals 4; capsule-wings very unequal.
6. Blades serrate, usually slenderly lobed. India. [Fig. 3.3] . . . . __B. josephii__
6. Blades subentire.
7. Umbo median; inflorescence simple, racemose. Madagascar [Fig. 3.4] . . . . __B. marojejyensis__
7. Umbo eccentric; inflorescence slightly branched. Central America: Guatemala. [Fig. 3.5] . . . . __B. militaris__
2. Axis of the inflorescence very short; inflorescence dense or lax or one-flowered.
8. Fruit wingless or with all the wings very narrow, mostly slender and indehiscent; blades entire or subentire at least on the basal half. Africa.
9. Blades bullate.
10. Petioles long-pilose. Cameroon. [Fig. 2.6] . . . . __B. microsperma__
10. Petioles glabrous. Nigeria. [Fig. 2.5] . . . . *__B. ficicola__
9. Blades flat, even (at least not noted as bullate).
11. Fruit subglobose, subterranean. Cameroon . . . . __B. hypogaea__
11. Fruit elongate.
12. Indument of peltate scales; staminate tepals 4.
13. Umbo submarginal; stamens about 8, styles 2. Congo, Gabon. [Fig. 3.6] . __B. subscutata__
13. Umbo distant from the blade-margin; stamens 18–20; styles 4. Congo, Cameroon. [Fig. 3.7] . . . . __B. schultzei__
12. Indument of simple hairs or bristles.
14. Petioles much shorter than the blades; umbo submarginal. Tropical West Africa. Fernando Po. [Fig. 3.8] . . . . __B. gilgii__
14. Petioles longer than the blades; staminate tepals 2.
15. Blades with nerves setose beneath; margins undulate. Cameroon. (1871). [Fig. 2.20] . . . . __B. scutulum__
(1921) . . . . __B. calophylla__
15. Blades with soft hairs.
16. Blades suborbicular with no apical projection; styles 3. (Gabon). [Fig. 3.9] . . . . __B. ferramica__
16. Blades ovate, apiculate or acute; styles 4.
17. Umbo subbasal; blade acute. Gabon. [Fig. 3.10] . . . . __B. triflora__
17. Umbo 5 cm above blade-base; blade apiculate. Gabon. [Fig. 3.11] . . . . . . __B. batesii__
8. Fruit with at least one broad wing, mostly dehiscent.
18. Blades symmetric or nearly so, straight.
19. Staminate tepals 2.
20. Fruits 3-angled with a single wing. Mexico. [Fig. 3.12] . . . . *__B. francisiae__
20. Fruit 4-angled, 4-winged. Africa: Cameroon . . . . __B. dusenii__
19. Staminate tepals 4.
21. Stem erect; blades orbicular. Indian Ocean: Socotra. [Fig. 3.13] . . . . __B. socotrana__

21. Stem scandent. South America.

22. Stamens on a long column, numerous; outer staminate tepals 8–20 mm long.

23. Blades coarsely dentate; cortex red-brown; outer staminate tepals dentate. Colombia, Ecuador. [Fig. 3.14] . . . . ***B. maurandiae***

23. Blades subentire; cortex gray, crustose; outer staminate tepals entire. Ecuador. [Fig. 3.15] . . . . ***B. geminiflora***

22. Stamens free or on a low torus.

24. Peduncles several and secund from leafless branches. Ecuador. [Fig. 3.16] . ***B. dodsonii***

24. Peduncles solitary, axillary.

25. Outer staminate tepals 14–15 mm long; stamens numerous; cortex gray, crustose. Ecuador. [Fig. 3.17] . . . . ***B. hitchcockii***

25. Outer staminate tepals not over 6 mm long; stamens few.

26. Blades subentire, bicolorous. Ecuador. [Fig. 3.18] . . . . ***B. truncicola***

26. Blades coarsely dentate, concolorous. Colombia, Ecuador. [Fig. 3.19] . ***B. segregata***

18. Blades asymmetric, straight or oblique.

27. Blades broadly ovate to orbicular.

28. Staminate tepals 2; ovary 4-alate. Africa: Cameroon . . . . ***B. dusenii***

28. Staminate tepals 4.

29. Blades cordate at base. Madagascar. [Fig. 3.20] . . . . ***B. mangorensis***

29. Blades rounded at base. China: Kweichow, Yunnan. [Fig. 3.21] . . . . ***B. cavaleriei***

27. Blades much longer than wide.

30. Stem erect, 1.5–2 m high; blades entire, strongly oblique. Brazil: Rio de Janeiro. [Fig. 3.22] . . . . * ***B. lubbersii***

30. Stem repent or scandent, slender; blades dentate. Gabon.

31. Blades straight; umbo submarginal. [Fig. 2.12] . . . . ***B. hirsutula***

31. Blades transverse; umbo distant from the margin. [Fig. 2.14] . . . . ***B. anisosepala***

1. Inflorescence basally and laxly once (excluding the pedicels) or more dichotomous.

32. Blades with several lobes.

33. Lobes again lobed; blades to 3 cm long. Siam. [Fig. 3.23] . . . . ***B. pumila***

33. Lobes simple; blades much larger.

34. Lobes slender, attenuate. India. [Fig. 3.3] . . . . ***B. josephii***

34. Lobes broad. Ecuador to Bolivia. [Fig. 1.3] . . . . ***B. erythrocarpa***

32. Blades not lobed or with a single basal auricle.

35. Blades without a distinct apex, reinform or suborbicular.

36. Staminate tepals 4.

37. Blades reniform, coarsely and densely serrate. (*B. reniformis* Vell., non Dryand.) Brazil: Rio de Janeiro. [Fig. 3.24] . . . . ***B. fabulosa***

37. Blades orbicular, crenate. Indian Ocean: Socotra. [Fig. 3.13] . . . . ***B. socotrana***

36. Staminate tepals 2; blades undulate-angled. Brazil.

38. Plant glabrous. State? [Fig. 3.25] . . . . ****B. umbraculifera***

38. Plant densely pale tomentose. Goiás. [Fig. 3.26] . . . . ***B. machrisiana***

35. Blades with a distinct protruding apex.

39. Blades symmetric.

40. Stem repent, short; leaves densely stellate-pubescent. Brazil: Rio de Janeiro . . . . ***B. santos-limae***

40. Stem scandent or pendent, elongate. Northwestern South America.

41. Umbo close to the broadly truncate blade-base; blade to 24 cm long, 7–11 cm wide; stamens few; largest capsule-wing falciform, ascending. Ecuador. [Fig. 3.27] . . . . ***B. aeranthos***

41. Umbo about equidistant from the rounded base and sides of the blade or the blade subcordate at base.

42. Blades prominently dentate, often more or less cordate.

43. Outer staminate tepals dentate; stamens on a tall column; capsule-wings very unequal. Colombia, Ecuador. [Fig. 3.14] . . . . ***B. maurandiae***

43. Outer staminate tepals entire; stamens on a low torus; capsule-wings subequal. Ecuador. [Fig. 3.28] . . . . ***B. ynesiae***

42. Blades subentire, rounded at base.

44. Filaments longer than the anthers.

45. Umbo ½ the length of the blade above its base; outer staminate tepals ~5 mm long; anthers ~2 mm long. Ecuador. [Fig. 3.29] . . . . ***B. pululahuana***

45. Umbo ¼ or less the length of the blade above its base; outer staminate tepals 9–15 mm long; anthers 1–1.5 mm long.

46. Stem erect; blades acute. Cultivated. [Fig. S3] . . . . ****B. brongniartii***

46. Stem scandent; blades acuminate. Peru.

47. Nerves and hairs of the blades red; inner staminate tepals at least as broad as the outer. [Fig. 3.30] . . . . ***B. rubrotincta***

47. Nerves and hairs of the blade pale; inner staminate tepals much narrower than the outer. [Fig. 3.31] . . . . ***B. wurdackii***

44. Filaments shorter than the anthers or lacking.

48. Stamen column tall. Colombia. [Fig. 3.32] . . . . ***B. spadiciflora***

48. Stamen column short or lacking.

49. Cortex dark red, firm; staminate tepals dark red, 9–12 mm long. Ecuador. [Fig. 3.33] . . . . ***B. sodiroi***

49. Cortex gray, friable; staminate tepals pink. Colombia, Ecuador. [Fig. 3.34] . . . . ***B. tropaeolifolia***

39. Blades asymmetric.

50. Petioles glabrous or sparsely and evanescently vestite.

51. Blade-margins strongly cut, angulate-repand or undulate and crenate-serrate.

52. Staminate tepals 2.

53. Umbo subcentral. Cultivated, origin unknown . . . . ****B. macrotis***

53. Umbo ~⅓ the length of the blade above the base. Cultivated, Central America? [Fig. 3.1] . . . . ****B. sparsipila***

52. Staminate tepals 4.

54. Capsule equally 3-horned. Venezuela. [Fig. 3.35] . . . . ***B. trujillensis***

54. Capsule alate; stem short.

55. Blades ovate or orbicular, oblique; capsule-wings strongly unequal. India. [Fig. 3.3] . . . . ***B. josephii***

55. Blades elliptic, transverse; capsule-wings equal. Peru. [Fig. 3.36] . . . . . ***B. mayasiana***

51. Blade-margins subentire.

56. Blade-base broadly emarginate or subcordate.

57. Staminate tepals 2; blade-base subcordate. Central America. [Fig. 3.37] . ****B. pruinata***

57. Staminate tepals 4; blade-base broadly emarginate.

58. Outer staminate tepals sparsely setiferous; bracts deciduous; pistillate bracteoles lanceolate. Cultivated from Venezuela. [Fig. 3.38] . . . . *_**B. boucheana**_

58. Outer staminate tepals glabrous; bracets persistent, obovate or elliptic.

59. Blades suborbicular, sinuate-emarginate at base; umbo 4–5 cm from base. Malaya. [Fig. 2.33] . . . . _**B. peninsulae**_

59. Blades ovate, attenuate toward apex, cordate at base; umbo 1–2 mm from base. Cultivated. Brazil or Venezuela. [Fig. S4] . . . . *_**B. wagenerana**_

56. Blade-base not at all indented.

60. Blades acute at either end, lanceolate, maculate. Brazil: state? [Fig. 3.22] . *_**B. lubbersii**_

60. Blades broadly rounded at the short end.

61. Staminate tepals 4. Brazil: Santa Catarina. [Fig. 3.39] . . . . _**B. biguassuensis**_

61. Staminate tepals 2. Indonesia: Sarawak . . . . _**B. baramensis**_

50. Petioles notably vestite.

62. Indument of the petioles clearly stellate or squamiform.

63. Blade-base subcordate; blade subentire to doubly serrate.

64. Indument stellate; blade straight. Malay Peninsula, Thailand, Cambodia, Vietnam. [Fig. 3.40] . . . . _**B. sinuata**_

64. Indument squamiform in rings around the petiole; blade transverse. Mexico. [Fig. 3.2] . . . . *_**B. manicata**_

63. Blade-base not more than shallowly indented. Brazil.

65. Blades more than twice as long as wide.

66. Blades transverse, entire. Pernambuco. [Fig. 3.41] . . . . _**B. lealii**_

66. Blades straight or nearly so, sinuate-dentate. Santa Catarina. [Fig. 3.42] . . . . _**B. campos-portoana**_

65. Blades suborbicular.

67. Staminate tepals 4; anthers obovate; blades 8–10-nerved, 20–30 cm long. Rio de Janeiro . . . . _**B. santos-limae**_

67. Staminate tepals 2; anthers linear; blades 6-nerved, 5 cm long. Bahía. [Fig. 2.40] . . . . _**B. fellererana**_

62. Indument of the petioles of simple hairs or so dense as not to be distinguishable.

68. Blades evenly tomentose beneath.

69. Mature blades with a single basal auricle. Cultivated, Tropical America. [Fig. 2.43] . . . . *_**B. sunorchis**_

69. Mature leaves unlobed.

70. Outer staminate tepals vestite. Mexico, Guatemala. [Fig. 3.43] . . . . _**B. peltata**_

70. Outer staminate tepals glabrous. (Considered conspecific with *B. peltata* by some authors.) Guatemala. [Fig. 3.44] . . . . _**B. kellermanii**_

68. Blades vestite mainly or exclusively on the nerves beneath.

71. Blades subcordate at base with overlapping lobes, pseudopeltate, undulate-angled. Indonesia.

72. Bracts suborbicular to obovate, ciliate. Java . . . . _**B. lobbii**_

72. Bracts elliptic, acute, pilose. Java, Sumatra, Borneo. [Fig. 2.37] . . . . _**B. mollis**_

71. Blades broadly rounded at base or very slightly and broadly indented.

73. Blades lance-oblong, much longer than wide, straight. Brazil: Rio de Janeiro. [Fig. 3.45] . . . . _**B. egregia**_

73. Blades reniform to broadly ovate or suborbicular, transverse.

74. Indument restricted to a ring of hairs at apex of petiole; blade broadly reniform. Brazil: Santa Catarina. [Fig. 3.46] .... ***B. pilgerana***
74. Indument widely distributed on petiole.
  75. Inflorescence many-flowered; outer staminate tepals obovate. Malaya. [Fig. 2.36] .... ***B. eiromischa***
  75. Inflorescence few-flowered; outer staminate tepals narrowly elliptic. Central America: Guatemala. [Fig. 3.47] .... ***B. sciadiophora***

Subkey 4

1. Blades compound; staminate tepals 4 (unknown in *B. semidigitata*).
  2. Inflorescence once dichotomous; stems branching, 25–35 cm high. China: Yunnan. [Fig. 4.1] .... ***B. hemsleyana***
  2. Inflorescence several times dichotomous; stems simple, bambusoid, several meters high. Brazil.
    3. Petioles muricate. Rio de Janeiro. [Fig. 4.2] .... ***B. pentaphylla***
    3. Petioles glabrous or variously pubescent but not muricate.
      4. Leaflets evenly serrate.
        5. Leaflets sessile; capsule broader than long. Rio de Janeiro, São Paulo. [Fig. 4.3] .... ***B. luxurians***
        5. Leaflets petiolulate. Rio de Janeiro. [Fig. 4.4] .... ***B. digitata***
      4. Leaflets lobulate as well as serrate.
        6. Flowers very numerous; tepals 2–3 mm long. Minas Gerais, Rio de Janeiro, São Paulo, Paraná. [Fig. 4.5] .... ***B. incisoserrata***
        6. Flowers rather few; tepals 10–12 mm long. Rio de Janeiro. [Fig. 4.6] ..... ***B. semidigitata***
1. Blades simple.
  7. Petioles with a ring of trichomes at apex, otherwise glabrous; blades with deeply cut subequal lobes. Bolivia. [Fig. S5] .... ***B. leathermaniae***
  7. Petioles glabrous or with generally distributed trichomes.
    8. Lobes obtuse, broadly subacute, or apiculate.
      9. Blade with its longest nerve strongly oblique to transverse to the petiole.
        10. Blade-base emarginate to broadly cuneate.
          11. Lobes all (or at least the terminal) oblong. Brazil.
            12. Shorter lobes broadly ovate or subtriangular, all lobes unlobed. Espírito Santo. [Fig. 4.7] .... ***B. altamiroi***
            12. Shorter lobes oblong like the longest, some lobes again lobed. Rio de Janeiro. [Fig. 4.8] .... ***B. aconitifolia***
          11. Lobes all broadly subtriangular or ovate.
            13. Stipules deciduous; blades doubly dentate; inflorescence 2–3 times dichotomous. Indonesia: Celebes. [Fig. 4.9] .... ***B. grandipetala***
            13. Stipules persistent; blades uniformly dentate; inflorescence once dichotomous.
              14. Stem and leaves hispid. Central America: Guatemala. [Fig. 4.10] .... ***B. ignea***
              14. Stem and leaves glabrous. Mozambique, Southern Rhodesia, and South Africa. [Fig. 4.11] .... ***B. sonderana***
        10. Blade-base strongly cordate.
          15. Leaves solitary or fascicled; stem tuberous or rhizomatous.
            16. Tepals 2 in both sexes, glandular-pubescent. Mexico. [Fig. 4.12] .... ***B. kortsiae***
            16. Tepals more than 2, glabrous.

17. Pistillate tepals 5, not lobed. Ecuador. [Fig. 4.13] .... ***B. triramosa***

17. Pistillate tepals more than 5 or some deeply lobed. Ecuador, Peru. [Fig. 4.14] .... ***B. octopetala***

15. Leaves separated by long internodes; stem erect.

18. Lobes rounded. Southern Brazil. [Fig. 4.15] .... ***B. lobata***

18. Lobes acute.

19. Lobes again lobed. Indochina .... ?***B. langbianensis***

19. Lobes not more than dentate.

20. Blades many-lobed; lobes mostly shallow.

21. Petioles glabrous except for an apical ring of stout trichomes. Brazil: Paraná. [Fig. S6] .... ***B. paranaënsis***

21. Petioles evenly vestite throughout.

22. Staminate and pistillate flowers 5-parted throughout, ovary partly superior. Hawaii. [Fig. S7] .... ***Hillebrandia sandwicensis***

22. Staminate perianth 4-parted; ovary 3-parted, wholly inferior.

23. Placentas bilamellate; blades ovate. Java. [Fig. 4.16] .... ***B. multangula***

23. Placentas simple; blades suborbicular or subreniform; inflorescence 5–6 times dichotomous. Brazil: Ceará to Bahía, Minas Gerais, and Goiás. [Fig. 4.17] .... ***B. reniformis***

20. Blades 2–4-lobed. Brazil.

24. Inflorescence 4-branched at base; blades 2-lobed; outer tepals vestite. Origin unknown. [Fig. 4.18] .... ****B. metallica***

24. Inflorescence dichotomous at base. Brazil.

25. Smaller capsule-wings subtriangular; inflorescence 4–5 times dichotomous; blades 2-lobed. Rio de Janeiro. [Fig. 4.19] .... ***B. cariocana***

25. Smaller capsule-wings narrowly crescentiform; blades 3–4-lobed.

26. Outer tepals puberulous. Rio de Janeiro. [Fig. 4.20] .... ***B. jocelinoi***

26. Outer tepals glabrous. Espírito Santo. [Fig. 4.21] .... ***B. apparicioi***

9. Blade with its longest nerve nearly or quite continuing the direction of the petiole or the nerves subequal.

27. Stem long, leafy, exceeding the basal leaves.

28. Blade deeply cordate with a narrow sinus; inflorescence 2–3 times dichotomous. Ecuador, Peru, and Bolivia.

29. Stem crustose, gray, stout, to 5 m long. [Fig. 1.3] .... ***B. erythrocarpa***

29. Stem not crustose, slender, relatively short. [Fig. 4.22] .... ***B. acerifolia***

28. Blade shallowly cordate or with a broad rounded sinus.

30. Inflorescence to 7 times dichotomous; flowers more than 100; tepals 4 mm long. Colombia to Bolivia. [Fig. 4.23] .... ***B. parviflora***

30. Inflorescence 3–5 times dichotomous.

31. Inflorescence terminal, 4–5 times dichotomous; blades mostly cut more than half-way to base; tepals 2–4 mm long. Brazil: Minas Gerais. [Fig. 4.24] .... ***B. gardneri***

31. Inflorescences mostly axillary; blades cut less than half-way to base; tepals 10–24 mm long. Brazil? Cultivated, but possibly a natural species.

32. Blades suborbicular, 5-lobed. Cultivated. [Fig. 4.25] .... ****B. platanifolia***

32. Blades ovate, 3-lobed. Cultivated. [Fig. S40] .... ****B. olbia***

27. Stem a tuber or short rhizome or when erect then shorter than the basal leaves.

33. Blades 1–5 cm long.

34. Staminate tepals 4; lobes short, rounded, entire; blades ~1 cm long. Indochina. [Fig. 4.26] . . . . ***B. hymenophylla***
34. Staminate tepals 2; lobes variously cut; blades ~4 cm long. Madagascar.
35. Lobes short and broad, coarsely crenate. [Fig. 4.27] . . . . ***B. bagotiana***
35. Lobes long with linear lobes. [Fig. 4.28] . . . . ***B. manajebensis***
33. Blades 7–20 cm long.
36. Lobes cut about half-way to base, serrate, acute; blade symmetric, basally cordate, staminate tepals 2. Burma. [Fig. 4.29] . . . . ***B. brandisiana***
36. Lobes short and broad.
37. Blade laterally cordate, the larger basal lobe covering the top of the petiole.
38. Lobes triangular, mostly again lobed, staminate tepals 4. Philippines. [Fig. 4.30] . . . . ***B. collisiae***
38. Lobes broadly rounded, serrulate. Ecuador. [Fig. 4.13] . . . . ***B. triramosa***
37. Blade basally cordate; lobes serrulate; staminate tepals 2. Mexico.
39. Blade shallowly cordate; lobes longer than wide. [Fig. 4.31] . . . . ****B. philodendroides***
39. Blade deeply cordate with overlapping basal lobes; lobes as broad as or broader than long.
40. Stipules and petioles pubescent. [Fig. 4.32] . . . . ****B. chivatoa***
40. Stipules and petioles glabrous. [Fig. 4.33] . . . . ****B. kenworthyae***
8. Lobes attenuate or long-acuminate (at least the terminal).
41. Petiole-apex bearing a dense ring of slender trichomes; stem-internodes short, the leaves and peduncles fasciculate at the apex of a stout rhizome. Ecuador. [Fig. 4.34] . . . . . ***B. ludwigii***
41. Petiole-apex without a ring of trichomes; stem-internodes elongate or the leaves and peduncle fasciculate from a tuber.
42. Flowering stem-internodes single or 2 with the terminal one usually the larger.
43. Leaf-lobes (some of them) again lobed.
44. Blade symmetric, straight; lobes 3–7.
45. Basal sinus very shallow, acute; lobes narrow, to 3 times as long as wide, sharply lobed.
46. Capsule oblong, wings linear. Siam. [Fig. 4.35] . . . . ***B. garrettii***
46. Capsule ovoid, unequally trialate. China: Szechwan. [Fig. S8] . . . . ***B. imitans***
45. Basal sinus deep but broadly rounded; lobes broad once to twice as long as wide, undulate-lobed. Burma. [Fig. 4.29] . . . . ***B. brandisiana***
44. Blade asymmetric, strongly oblique to transverse to the petiole.
47. Blade obliquely cordate; inflorescence 2–3 times dichotomous. China: Yunnan. [Fig. 4.36] . . . . ***B. miranda***
47. Blade straight-cordate.
48. Inflorescence twice dichotomous; pistillate tepals 3.
49. Blades cut less than half-way to the base; lobes broad. Mexico. [Fig. 4.37] . . . . ***B. acutiloba***
49. Blades cut very deeply; lobes narrow. China: Szechwan, Yunnan. [Fig. 4.38] . . . . ***B. taliensis***
48. Inflorescence only once dichotomous.
50. Basal sinus deep, broadly rounded. Siam. [Fig. 4.39] . . . . ***B. obovoidea***
50. Basal sinus shallow, acute.
51. Internodes one or none. China: Szechwan, Hupei, Kweichow. [Fig. 4.40] . . . . ***B. pedatifida***
51. Internodes 2 or more. India. [Fig. 4.41] . . . . ***B. sikkimensis***

43. Leaf-lobes unlobed, serrulate to duplicate-dentate.

52. Blades 3–5-lobed, at least some oblique.

53. Inflorescence 2–3 times dichotomous; blades all strongly oblique. Tropical Africa. [Fig. 4.42] .... ***B. oxyloba***

53. Inflorescence once dichotomous; some blades straight. Indochina. [Fig. 4.43] .... ***B. baviensis***

52. Blades 6–7-lobed.

54. Blades cut not more than half-way to base, cordate at base.

55. Inflorescence twice dichotomous; ovary wings very narrow; stem unknown. Colombia. [Fig. 4.44] .... ***B. hydrophylloides***

55. Inflorescence once dichotomous; ovary wings as broad as or broader than high. China: Fukien. [Fig. 4.45] .... ***B. digyna***

54. Blades deeply cut, emarginate at base. China.

56. Lobes lanceolate, curved, to 18 cm long and 5 cm wide. Yunnan .... ***B. laminariae***

56. Lobes narrowly lanceolate, to 12 cm long and 2.5 cm wide. Kwangtung. [Fig. 4.46] .... ***B. circumlobata***

42. Flowering stem internodes 3 or more, usually decreasing in size upward.

57. Inflorescence 4–7 times dichotomous.

58. Outer staminate tepals narrow, 17–24 mm long, red. Peru. [Fig. 4.47] . ***B. monadelpha***

58. Outer staminate tepals broad, 3–7 mm long.

59. Inflorescence 6–7 times dichotomous; flowers more than 100; tepals 4 mm long. Colombia to Bolivia. [Fig. 4.23] .... ***B. parviflora***

59. Inflorescence 4–5 times dichotomous.

60. Blades deeply cordate at base. Bolivia. [Fig. 4.48] .... ****B. wollnyi***

60. Blades emarginate at base. Brazil: Minas Gerais. [Fig. 4.24] .... ***B. gardneri***

57. Inflorescence 1–3 times dichotomous.

61. Blades 6–7-lobed; ovary 2-celled. China.

62. Lobes obtrapezoid, truncate on one side, attenuate on the other; stipules deciduous. Yunnan. [Fig. 4.49] .... ***B. truncatiloba***

62. Lobes evenly tapered at apex.

63. Stipules persistent; lobes narrowly lanceolate, to 12 cm long and 2.5 cm wide. Kwangtung. [Fig. 4.46] .... ***B. circumlobata***

63. Stipules deciduous; lobes broader. Yunnan.

64. Blades suborbicular, glabrous .... ***B. laminariae***

64. Blades ovate, vestite above. [Fig. 4.50] .... ***B. macrotoma***

61. Blades 2–5-lobed or more (*B. palmata*) with the additional lobes much reduced.

65. Stipules deciduous.

66. Ovary wingless.

67. Ovary ellipsoid-fusiform. Tropical Africa. [Fig. 4.42] .... ***B. oxyloba***

67. Ovary clavate-oblong. Madagascar. [Fig. 4.51] .... ***B. cladocarpa***

66. Ovary alate.

68. Inflorescence 3 times dichotomous. China: Yunnan, Kweichow, Kwangsi, Kwangtung. [Fig. 4.52] .... ***B. edulis***

68. Inflorescence only once dichotomous.

69. Basal blade-sinus shallow. India. [Fig. 4.41] .... ***B. sikkimensis***

69. Basal blade-sinus deep. Indochina. [Fig. 4.43] .... ***B. baviensis***

65. Stipules persistent.

70. Staminate tepals 2.

71. Blades glabrous, straight, ovate, 3-lobed. (*B. elegans* Elmer, non H.B.K.) Philippines. [Fig. 4.53] .... ***B. sarmentosa***

71. Blades vestite, oblique to transverse.

72. Lobes cut more than half-way to base; blades almost wholly covered with a dense mat of brown tomentum. Mexico. [Fig. 4.54] .... ***B. bettinae***

72. Lobes cut less than half-way to base; blades laxly pubescent. Central America: Costa Rica, Panama. [Fig. 4.55] .... ***B. involucrata***

70. Staminate tepals 4.

73. Ovary 3-celled.

74. Largest capsule-wing apical, ascending; only the terminal lobe acuminate. Ecuador. [Fig. 4.22] .... ***B. acerifolia***

74. Largest capsule-wing subapical, deflexed. China: (Formosa) Taiwan . ***B. formosana***

73. Ovary 2-celled.

75. Lobes cut very deeply; stem short. China: Yunnan. [Fig. 4.56] .... ***B. scitifolia***

75. Lobes cut less than half-way to base.

76. Bracts broader than long. China: Yunnan. [Fig. 4.57] .... ***B. mengtzeana***

76. Bracts longer than broad. Southern China, India, Burma. [Fig. 4.58] .... ****B. palmata***

Subkey 5

1. Inflorescence compound, paniculate with a central axis, sometimes foliaceous-bracteate.

2. Blades compound; staminate tepals 2.

3. Leaflets subentire. Central America: Honduras. [Fig. 5.1] .... ***B. thiemei***

3. Leaflets distinctly cut.

4. Leaflets coarsely and densely dentate, unlobed. Mexico, Guatemala. [Fig. 5.2] .... ***B. carolineifolia***

4. Leaflets laxly undulate-dentate, some or all with a single large lateral lobe. (Conspecific with *B. thiemei* by some authors.) Mexico. [Fig. 5.3] .... ****B. macdougallii***

2. Blades simple.

5. Staminate tepals 4.

6. Bracts small.

7. Blades suborbicular, slightly oblique to the petiole. China: Sikang, Yunnan. [Fig. 5.4] .... ***B. muliensis***

7. Blades ovate; transverse to the petiole. Peru. [Fig. 5.5] .... ***B. soror***

6. Bracts (at least the lowest) foliaceous.

8. Blade-lobes very unequal.

9. Blades straight; lobes ovate; branches 2-flowered in involucrate heads with many bulblets. India. [Fig. 5.6] .... ****B. gemmipara***

9. Blades transverse; lobes narrowly triangular; branches several- to many-flowered, dichotomous at base. Mexico. [Fig. 5.7] .... ***B. falciloba***

8. Blade-lobes subequal.

10. Blades cuneate at base then shallowly cordate, about 4-lobed. Mexico, Guatemala. [Fig. 5.8] .... ****B. biserrata***

10. Blades not cuneate at base, more or less directly cordate, 4–6 lobed.

11. Plant stemless; blades deeply cordate, about 6-lobed. China: Sikang, Yunnan. [Fig. 5.4] .... ***B. muliensis***

11. Plant caulescent.

12. Blades with large pale spots. Borneo. [Fig. 5.9] .... ****B. diadema***

12. Blades concolorous.

13. Blades sparsely puberulous; outer staminate tepals 18–24 mm long; anthers obovoid. Brazil? Cultivated, but possibly a natural species. [Fig. 4.25] ...... ****B. plantanifolia***

13. Blades glabrous; outer staminate tepals 8–10 mm long; anthers ellipsoid. Brazil: Rio de Janeiro. [Fig. 4.8] .... ***B. aconitifolia***

5. Staminate tepals 2.

14. Branches of the inflorescence unequal, the lowest elongate; ovary oblong with very unequal wings, the largest triangular. Guatemala. [Fig. 5.10] .... ***B. trigonoptera***

14. Branches of the inflorescence subequal, very short.

15. Bracts deciduous; flowers appearing before the leaves. Guatemala. [Fig. 1.1] .... ****B. crassicaulis***

15. Bracts persistent; flowers appearing with the leaves. Mexico, Guatemala, Honduras, El Salvador. [Fig. 5.11] .... ****B. heracleifolia***

1. Inflorescence simple, racemose, fasciculate, or one-flowered.

16. Blades deeply cut to compound.

17. Lobes numerous; blades dissected, broadly ovate; staminate tepals 4. New Guinea. [Fig. 5.12] .... ***B. oligandra***

17. Lobes or leaflets 2–5, broad; staminate tepals 2.

18. Plants caulescent. South Africa: Natal.

19. Blades glabrous above; principal lobes with straight or concave margins [Fig. 5.13] .... ***B. suffruticosa***

19. Blades vestite above; principal lobes with convex margins. [Fig. 5.14] .... ***B. partita***

18. Plants stemless. Madagascar.

20. Blades compound, tripartite. [Fig. 5.15] .... ***B. leandrii***

20. Blades simple, deeply bilobed. [Fig. 5.16] .... ***B. bernieri***

16. Blades not lobed more than ¾ to base.

21. Staminate tepals 2.

22. Plant stemless, tuberous. Madagascar. [Fig. 4.27] .... ***B. bagotiana***

22. Plant caulescent.

23. Leaves vestite.

24. Fruit unequally 3-winged. Indochina .... ***?B. langbianensis***

24. Fruit wingless, 4-angled. West Africa: Fernando Po. [Fig. 5.17] ...... ***B. prismatocarpa***

23. Leaves soon glabrous.

25. Blade-lobes shallow, broad, serrulate. Indonesia: Celebes. [Fig. 518] ... ***B. bonthainensis***

25. Blade-lobes deep, narrow, coarsely dentate to lobed. South Africa: Natal. [Fig. 5.19] .... ***B. buttonii***

21. Staminate tepals 4 or more.

26. Blades lobed more than half-way to base.

27. Leaves densely pubescent; plant stemless. Peru. [Fig. 5.20] .... ***B. weberbaueri***

27. Leaves glabrous or subglabrous.

28. Blades whitish beneath, nearly or quite straight. Mexico.

29. Bracts green, persistent, the lower subfoliaceous; blades glabrous, coarsely dentate. [Fig. 5.21] .... ***B. angustiloba***

29. Bracts scarious, deciduous, all small; blades slightly vestite, dentate or denticulate.
 30. Lobes ovate-oblong, broadly subacute, dentate. [Fig. 5.22] . . . . ***B. pedata***
 30. Lobes triangular, denticulate. (Doubtfully distinct from *B. pedata*.) [Fig. 5.23] . . . . ***B. anodifolia***
28. Blades concolorous.
 31. Lobes broadly rounded. Cuba. [Fig. 5.24] . . . . ****B. cowellii***
 31. Lobes attenuate. China.
  32. Lobes narrow; plant stemless. Szechwan, Hupei, Kweichow. [Fig. 4.40] . ***B. pedatifida***
  32. Lobes broadly subrhombic; plant caulescent. Yunnan. [Fig. 5.25] . . . . ***B. lacerata***
26. Blades not lobed more than half-way to base.
 33. Internodes very short; leaves solitary to subfasciculate.
  34. Staminate tepals more than 4, usually 8. Ecuador, Peru. [Fig. 4.14] . . . . . ****B. octopetala***
  34. Staminate tepals 4.
   35. Lobes attenuate, numerous; blades subreniform. Siam. [Fig. 5.26] . . . . ***B. aceroides***
   35. Lobes acute or rounded.
    36. Blade-base cuneate; lobes rounded. Indochina. [Fig. 4.26] . . . . ***B. hymenophylla***
    36. Blade-base cordate; lobes acute. China: Kweichow.
     37. Plant tuberous; leaves fascicled; lobes ~4. [Fig. 5.27] . . . . ***B. lipingensis***
     37. Plant rhizomatous; leaves slightly separated; lobes 2. [Fig. 5.28] . . . . ***B. smithiana***
 33. Internodes elongate; plants caulescent.
  38. Blades suborbicular or subreniform; lobes subequal, all attenuate; basal nerves 8–9.
   39. Lobes one-lobed; blades suborbicular. (*B. calophylla* Irmscher, non Engler.) China: Kiangsi. [Fig. 5.29] . . . . ***B. algaia***
   39. Lobes several-lobed; blades subreniform. Mexico. [Fig. 5.30] . . . . ***B. portillana***
  38. Blades ovate; lobes unequal; basal nerves 4–7.
   40. Lobes all acute or obtuse. America.
    41. Bracts much shorter than the pedicels; outer staminate tepals attenuate, serrulate. Mexico. [Fig. 5.31] . . . . ***B. fernaldiana***
    41. Bracts large, covering the pedicels; outer staminate tepals rounded, entire. Peru. [Fig. 5.32] . . . . ***B. velata***
   40. Lobes (at least the longest) attenuate.
    42. Basal blade-nerves 4; blades transverse. East Africa. [Fig. 5.33] . . . . ***B. tayloriana***
    42. Basal blade-nerves more than 4.
     43. Lobes again lobed. Indochina . . . . ***?B. langbianensis***
     43. Lobes simple.
      44. Petioles spreading-villous; blades red-ciliate. China: Yunnan. [Fig. 5.34] . . . . ***?B. villifolia***
      44. Petioles inconspicuously pubescent to glabrous. India, China, Burma.
       45. Tepals yellow . . . . ***B. flaviflora***
       45. Tepals white to rose (*B. laciniata* Roxburgh non sensu Forbes, non sensu Hayata) [Fig. 4.58] . . . . ***B. palmata***

Subkey 6

1. Blades oblique to transverse to the petiole.
 2. Blades cut nearly or completely to the costa; staminate tepals 4. South Africa: Natal. [Fig. 6.1] . . . . ***B. gueinziana***

2. Blades cut not more than ¾ to the costa.
3. Lobes obtuse, entire; petioles 20–30 mm long. Philippines. [Fig. 6.2] .... ***B. quercifolia***
3. Lobes acute, serrate.
4. Blades dimidiate. Philippines. [Fig. 6.3] .... ***B. longibractea***
4. Blades equal on the petiole. New Guinea. [Fig. 6.4] .... ***B. serratipetala***
1. Blades straight or sessile, the central nerve continuing the direction of the petiole when present.
5. Blades cut nearly or completely to the costa; petioles less than 1 cm long.
6. Basal lobes dissected; blades ample at base. New Guinea.
7. Inflorescence clearly dichotomous, terminal; staminate tepals 2 .... ***B. kelliana***
7. Inflorescence few-flowered, not clearly dichotomous, often axillary; stipules persistent.
8. Stipules entire; staminate tepals 2. [Fig. 6.5] .... ***B. bipinnatifida***
8. Stipules serrate or fimbriate. [Fig. 6.6] .... ***B. warburgii***
6. Basal lobes not cut more than serrate.
9. Blades unlobed on the basal third or fourth. New Guinea. [Fig. 6.7] .... ***B. pinnatifida***
9. Blades regularly lobed throughout.
10. Lobes all or nearly all entire. Africa: Gabon. [Fig. 6.8] .... ***B. filicifolia***
10. Lobes all or nearly all serrate or dentate.
11. Blades pinnate, cut complete to the costa. New Guinea .... **B. kelliana**
11. Blades pinnatifid, cut nearly but not quite to the costa.
12. Capsule-wings crescent-shaped. Gabon. [Fig. 6.9] .... ***B. aspleniifolia***
12. Capsule-wings subtriangular. New Guinea. [Fig. 6.10] .... ***Symbegonia geraniifolia***
5. Blades nowhere cut more than ¾ toward the costa.
13. Blades ample 30–70 mm wide. Indonesia.
14. Lobes obtuse, entire, cut ¾ toward the costa; petioles 2 mm long. Celebes. [Fig. 6.11] .... ***B. humilicaulis***
14. Lobes acute, serrate.
15. Blades sessile. New Guinea. [Fig. 6.12] .... ***B. clemensiae***
15. Blades petiolate.
16. Plants tuberous; leaves single; blades few-lobed. Tibet-Burma. [Fig. S9] .... ***B. hymenophylloides***
16. Plants caulescent; leaves several; blades 5–13-lobed.
17. Suprabasal; lobes 5–6, narrower than the sinuses. Philippines. [Fig. 6.13] .... ***B. incisa***
17. Suprabasal lobes 11–13, wider to about as wide as the sinuses. New Guinea. [Fig. 6.4] .... ***B. serratipetala***
13. Blades narrow, 4–25(–30) mm wide.
18. Staminate tepals 4; ovary equally 3-horned; blades very unequal at base. Colombia. [Fig. 6.14] .... ***B. hexandra***
18. Staminate tepals 2.
19. Blades caudate-acuminate.
20. Blades dimidiate with the lower lobe semiorbicular and covering the petiole, 7–11 cm long. New Guinea. [Fig. 6.15] .... ***Symbegonia mooreana***
20. Blades subequilateral at base. Philippines.
21. Blades 3–7 cm long; staminate tepals broadly ovate, 3 mm long. [Fig. 6.16] ... ***B. lacera***
21. Blades 8–12 cm long; staminate tepals orbicular, 4 mm long. [Fig. 6.17] .. ***B. lancifolia***
19. Blades acute or acuminate, 1.1–5 cm long.
22. Lobes regular, short; blade 1.1–2.5 cm long. Africa: Gabon. [Fig. 6.18] .. ***B. minutifolia***
22. Lobes irregular, apical; blade 2–5 cm long. Philippines. [Fig. 6.19] .... ***B. loheri***

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Subkey 7

1. Tepals of both staminate and pistillate flowers more than 5.
  2. Blades sublobate, dentate; staminate tepals obovate. Ecuador, Peru. [Fig. 4.14] . ***B. octopetala**
  2. Blades evenly rounded, subentire; staminate tepals sublinear. Peru. [Fig. 1.5] . **B. anemoniflora**
1. Tepals not more than 5.
  3. Staminate tepals 2.
    4. Blades orbicular.
      5. Inflorescence dichotomous at base. Madagascar. [Fig. 7.1] . . . . **B. heteropoda**
      5. Inflorescence not dichotomous.
        6. Inflorescence unbranched, 1–2-flowered. Madagascar. [Fig. 7.2] . . . . **B. antongilensis**
        6. Inflorescence with a long central axis and many secund flowers. Mexico. [Fig. 7.3] . . . . ***B. hydrocotylifolia**
    4. Blades reniform.
      7. Inflorescence racemose, few-flowered. Madagascar. [Fig. 7.4] . . . . **B. neoperrieri**
      7. Inflorescence dichotomous or trichotomous.
        8. Blades sinuate-dentate or angled with acute points, shallowly cordate.
          9. Blades crenate between the angles; plant glabrous. Madagascar . . . . **B. goudotii**
          9. Blades not crenate.
            10. Inflorescence dichotomous; blades irregularly sinuate; capsule-wings very unequal. Mexico. [Fig. 4.12] . . . . ***B. kortsiae**
            10. Inflorescence trichotomous; blades regularly sinuate; capsule-wings equal. India. [Fig. 7.5] . . . . **B. floccifera**
        8. Blades subentire or crenate, without acute points except at base.
          11. Blades crenate; inflorescence once dichotomous. Madagascar. [Fig. 7.6] . **B. ankaranensis**
          11. Blades subentire; inflorescence 2–3-dichotomous.
            12. Plant glabrous. Madagascar. [Fig. 7.7] . . . . **B. trullifolia**
            12. Plant pubescent. Honduras. [Fig. 7.8] . . . . **B. hypolipara**
  3. Staminate tepals 4 or rarely 3.
    13. Leaf subsessile, basal, solitary. Mexico. [Fig. 7.9] . . . . ***B. monophylla**
    13. Leaves distinctly petiolate.
      14. Blades reniform, distinctly wider than long.
        15. Margins subentire.
          16. Inflorescence regularly 5–6-times dichotomous; blades stellate-pubescent. Brazil. [Fig. 7.10] . . . . **B. petasitifolia**
          16. Inflorescence cincinnate; blades crisp-pilose. Malaya. [Fig. 7.11] . . . . **B. nurii**
        15. Margins crenate.
          17. Blades bullate; inflorescence dichotomous. Brazil. [Fig. 7.12] . . . . **B. crispula**
          17. Blades even.
            18. Base tuberous; stipules very few.
              19. Outer staminate tepals to 4.5 mm long. Siam. [Fig. 7.13] . . . . **B. saxifragifolia**
              19. Outer staminate tepals 16–20 mm long. Bolivia. [Fig. 7.14] . . . . **B. tominana**
            18. Base rhizomatous; stipules numerous.
              20. Leaves long-villous on stipules and underside of nerves. Philippines . . . **B. longovillosa**
              20. Leaves sparsely pilose. West Indies.
                21. Inner staminate tepals obtuse; blades to 22 mm wide; inflorescences 1–2-flowered. Cuba. [Fig. 7.15] . . . . **B. ekmanii**

21. Inner staminate tepals retuse; blades 4–10 cm wide; inflorescence 2–6-flowered. Hispaniola. [Fig. 7.16] .... ***B. rotundifolia***

14. Blades orbicular, about as wide as long.

22. Leaf subsessile, basal, solitary. Mexico. [Fig. 7.9] .... ****B. monophylla***

22. Leaves distinctly petiolate.

23. Margins duplicate-serrate.

24. Blades strongly cordate. Peru. [Fig. 7.17] .... ****B. veitchii***

24. Blades shallowly cordate.

25. Third capsule-wing smaller than the other 2; petioles stout, to 7 cm long; placentas simple. South Africa: Natal. [Fig. 7.18] .... ****B. geranioides***

25. Third capsule-wing equaling or larger than the other 2, petioles slender.

26. Petiole 5–15 mm long; capsule-wings equal; placentas simple. Siam, Malaya. [Fig. 7.19] .... ***B. intermixta***

26. Petioles 15–55 mm long; capsule-wings unequal; placentas bilamellate. Siam. [Fig. 7.20] .... ***B. kerrii***

23. Margins crenate to subentire.

27. Blades deeply cordate.

28. Peduncles about equaling the leaves; capsule-wings subequal; ovary 2-celled. Indonesia: Sumatra .... ***B. orbiculata***

28. Peduncles exceeding the leaves.

29. Base tuberous; staminate tepals to 4.5 mm long. Siam. [Fig. 7.13] .. ***B. saxifragifolia***

29. Base rhizomatous.

30. Inner staminate tepals obtuse; blades to 22 mm wide; inflorescence 1–2-flowered. Cuba. [Fig. 7.15] .... ***B. ekmanii***

30. Inner staminate tepals retuse; blades 4–11 cm wide. West Indies: Hispaniola. [Fig. 7.16] .... ***B. rotundifolia***

27. Blades shallowly cordate to cuneate.

31. Blades broadly cuneate; capsule-wings crescentiform. Madagascar. [Fig. 7.21] .... ***B. kalabenonensis***

31. Blades shallowly cordate; capsule-wings triangular, acute.

32. Capsule-wings spreading, narrow, tapering evenly. Burma. [Fig. 7.22] .... ***B. tricuspidata***

32. Capsule-wings ascending with upper side horizontal, broad. Siam. [Fig. 7.23] .... ***B. incerta***

Subkey 8

1. Inflorescence dichotomous at base (excluding pedicels).

2. Base of blade strongly cordate.

3. Auricles overlapping.

4. Petioles glabrous. Burma. [Fig. 2.35] .... ***B. subperfoliata***

4. Petioles vestite.

5. Blade symmetric. Hong Kong. [Fig. 8.1] .... ****B. fimbristipula***

5. Blades asymmetric.

6. Inflorescence 1–3 times dichotomous; blades bullate. Malaya. .... ***B. rajah***

6. Inflorescence non-dichotomous; blades even. Indonesia: Moluccas: Amboina. [Fig. 22.13] .... ***B. muricata***

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3. Auricles not overlapping.

7. Ovary 2-celled.

8. Margins evenly and minutely serrulate. India. [Fig. 8.2] .... ***B. obversa***

8. Margins with alternating large and small teeth. Siam. [Fig. 8.3] .... ***B. grata***

7. Ovary 3-celled.

9. Blades inequilateral.

10. Inflorescence once dichotomous; fruit very unequally alate; bracts persistent. India. [Fig. 8.4] .... ***B. adscendens***

10. Inflorescence twice or more times dichotomous.

11. Staminate tepals 4. Siam. [Fig. 8.5] .... ***B. discreta***

11. Staminate tepals 2. China: Yunnan .... ***B. summoglabra***

9. Blades equilateral.

12. Staminate tepals more than 4, usually 8. Ecuador, Peru. [Fig. 4.14] ..... ****B. octopetala***

12. Staminate tepals 4.

13. Capsule-wings equal. Ceylon. [Fig. 8.6] .... ***B. cordifolia***

13. Capsule-wings unequal.

14. Peduncle only 35 mm long. Siam. [Fig. 8.7] .... ?***B. putii***

14. Peduncle elongate, exceeding the leaves. South Africa: Natal. [Fig. 7.18] .... ***B. geranioides***

2. Base of blade shallowly cordate or retuse to cuneate.

15. Blade rounded at apex.

16. Staminate tepals 2.

17. Capsule-wings subequal, all narrow; stigmas flat-reniform. Madagascar. [Fig. 8.8] .... ***B. isalensis***

17. Capsule-wings unequal; stigmas linear-spiral. West Africa: Cameroon. [Fig. 8.9] .... ?***B. subtilis***

16. Staminate tepals 4.

18. Blades cuneate at base, 6–9 mm long. Indochina. [Fig. 4.26] .... ***B. hymenophylla***

18. Blades shallowly cordate.

19. Petioles glabrous; blade 13–25 mm long; stamens ~30; anthers zygomorphic, emarginate. Siam, Malaya. [Fig. 7.19] .... ***B. intermixta***

19. Petioles pubescent.

20. Anther-connective produced; capsule-wings unequal. South Africa: Natal. [Fig. 7.18] .... ***B. geranioides***

20. Anther-connective not produced; capsule-wings equal, very narrowly triangular, spreading. Burma. [Fig. 7.22] .... ***B. tricuspidata***

15. Blades acute to acuminate.

21. Staminate tepals 2.

22. Blades subdimidiate, ~ 4 cm long, filaments unequally connate; anthers clavate. Indonesia: Sumatra. [Fig. 8.10] .... ***B. horsfieldii***

22. Blades not dimidiate.

23. Margins coarsely double-dentate; nerves exserted. Burma. [Fig. 8.11] .?***B. moulmeinensis***

23. Margins finely dentate or double-crenate; nerves included. Madagascar.

24. Blades distinctly cordate; margins double-crenate; inflorescence once dichotomous. [Fig. 8.8] .... ***B. isalensis***

24. Blades rounded at base and minutely if at all cordate; inflorescence twice dichotomous. [Fig. 8.12] .... ***B. anjuanensis***

24. Staminate tepals 4.

25. Blades asymmetric.

26. Blades acuminate, narrowly ovate.

27. Base broadly rounded. Malaya. [Fig. 8.13] . . . . *B. klossii*

27. Base obliquely and shallowly cordate.

28. Inflorescence once dichotomous; petioles glabrous. (*B. monticola* Ridley, non C. DC.). Malaya. [Fig. 8.14] . . . . ?*B. alpina*

28. Inflorescence more than once dichotomous; petioles lacerate-lepidote. Philippines? . . . . *B. oxysperma*

26. Blades acute or apiculate, broadly ovate to suborbicular. Malaya.

29. Base truncate; blade thick. [Fig. 8.15] . . . . *B. rheifolia*

29. Base broadly rounded to shallowly cordate; blade thin.

30. Anthers clavate, retuse. [Fig. 8.16] . . . . *B. forbesii*

30. Anthers oblong; connective extended. [Fig. 8.17] . . . . *B. tiomanensis*

25. Blades symmetric or nearly so.

31. Margins coarsely double-dentate; nerves exserted. Burma. [Fig. 8.11] ?*B. moulmeinensis*

31. Margins finely and regularly dentate to double-crenate.

32. Base of blade broadly truncate or subtruncate. Malaya. [Fig. 8.15] . . . . *B. rheifolia*

32. Base of blade shallowly cordate or broadly rounded.

33. Staminate tepals elliptic, acute; blades regularly crenate-apiculate. India. [Fig. 8.18] . . . . *B. crenata*

33. Staminate tepals obtuse.

34. Anthers linear-oblong; connective produced. Malaya. [Fig. S17] . . . . *B. herveyana*

34. Anthers ovate or clavate; connective not produced.

35. Staminate tepals oblong. Malaya. [Fig. 8.16] . . . . *B. forbesii*

35. Staminate tepals obovate.

36. Capsule-wings unequal, obtuse. India. [Fig. 8.19] . . . . *B. ovatifolia*

36. Capsule-wings equal, narrowly triangular, spreading. Burma. [Fig. 7.22] . . . . *B. tricuspidata*

1. Inflorescence not dichotomous at base, its axis simple or lacking (irrespective of pedicels).

37. Base of blade shallowly cordate to broadly cuneate.

38. Staminate tepals 2.

39. Blades subdimidiate; staminate tepals orbicular. Indonesia: Sumatra. [Fig. 8.10] . . . . ?*B. horsfieldii*

39. Blades equal on petiole.

40. Blades subtruncate or broadly cuneate at base; stamens 4. Madagascar.

41. Filaments free; blades finely crenate. [Fig. 8.20] . . . . *B. sambiranensis*

41. Filaments connate in a column; blades coarsely crenate. [Fig. 8.21] . . . . *B. antsingyensis*

40. Blades rounded or shallowly cordate at base.

42. Inflorescence paniculate, 11 cm long. Malaya . . . . *B. yappii*

42. Inflorescence simple, few-flowered; bracts fimbriate.

43. Petioles to 15 cm long; blades to 12 cm long; placentas simple; tepals red. China: Hupeh. [Fig. 8.22] . . . . *B. henryi*

43. Petioles to 3.5 cm long; blades to 2.2 cm long; placentas bilamellate. West Africa: Cameroon. [Fig. 8.9] . . . . ?*B. subtilis*

38. Staminate tepals 4.

44. Flowers 1–3 at apex of peduncle; filaments forming a column; blades 6–25 mm long.

45. Capsule-wings equal. Malaya, Siam. [Fig. 7.19] . . . . **_B. intermixta_**
45. Capsule-wings unequal. Nossi-Bé near Madagascar. [Fig. 8.23] . . . . **_B. perpusilla_**
44. Flowers in a raceme.
46. Blades about as broad as long, regularly dentate; capsule unequally alate. Colombia. [Fig. 8.24] . . . . **_B. macra_**
46. Blades distinctly longer than broad.
47. Blades oblique at base; connective extended and greatly dilated. New Guinea [Fig. 8.25] . . . . **_B. archboldiana_**
47. Blades symmetric; connective little if at all extended.
48. Ovary alate, 2-celled. India. [Fig. 8.26] . . . . **_B. aliciae_**
48. Ovary wingless, 3-celled. China: Szechwan. [Fig. 8.27] . . . . **_B. wilsonii_**
37. Base of blade deeply cordate.
49. Staminate tepals 5–10; pistillate tepals mostly more than 5; capsule-wings very unequal. Andean South America.
50. Blades acute or subacute.
51. Petioles and underside of blades white-lanate; inflorescence 2-flowered; blades sharply acute. Peru. [Fig. 8.28] . . . . **_B. polypetala_**
51. Petioles and underside of blades not more than tomentose.
52. Largest capsule-wing ovate-oblong, obtuse; inflorescence laxly secund-racemose; blades tomentose above and below. Colombia. [Fig. 8.24] . . . . **_B. macra_**
52. Largest capsule-wing triangular, acute; styles much branched.
53. Bracts entire; largest capsule-wing about as wide as high. Ecuador. [Fig. 8.29] . . . . **_B. aequatorialis_**
53. Bracts dentate, ciliate; largest capsule-wing much wider than high. Argentina. [Fig. 8.30] . . . . **_B. rubricaulis_**
50. Blades broadly rounded.
54. Staminate tepals 3–6 mm long; blades to 3 cm long.
55. Blades 12–24 mm long. Peru. [Fig 8.31] . . . . **_B. gracillima_**
55. Blades 24–30 mm long. Bolivia. [Fig. 8.32] . . . . **_?B. tenuicaulis_**
54. Staminate tepals 8–30 mm long.
56. Inflorescence 1–2-flowered; staminate tepals 8–11, narrow. Peru, Bolivia. [Fig. 8.33] . . . . **_B. pleiopetala_**
56. Inflorescence more than 2-flowered; staminate tepals less than 8, broad.
57. Largest capsule-wing obtuse; tepals white. Ecuador, Peru. [Fig. 4.14] . . . **_*B. octopetala_**
57. Largest capsule-wing acute; tepals red-spotted. Colombia. [Fig. 8.34] . . . . . . **_*B. rosacea_**
49. Staminate tepals 2 or 4; pistillate tepals mostly 2 or 5.
58. Blade-margin uniformly rounded and dentate or crenate.
59. Staminate tepals 2; blades bullate, variegated. Mexico. [Fig. 8.35] . . . . **_B. imperialis_**
59. Staminate tepals 4.
60. Petioles glabrous or glabrescent.
61. Basal blade-lobes overlapping. Burma. [Fig. 2.35] . . . . **_B. subperfoliata_**
61. Basal blade-lobes free.
62. Inflorescence racemose. Indochina. [Fig. 8.36] . . . . **_B. harmandii_**
62. Inflorescence unilaterally paniculate. Siam. [Fig. 8.5] . . . . **_B. discreta_**
60. Petioles notably vestite.
63. Outer staminate tepals 6 mm long, yellow. Colombia. [Fig. 8.37] . . . . **_B. lutea_**
63. Outer staminate tepals 11–18 mm long, bright red.

64. Petioles lanate; outer staminate tepals entire. Ecuador. [Fig. 8.38] ...... *_**B. froebelii**_
64. Petioles villous; outer staminate tepals serrate. Peru. [Fig. 8.39] .... _**B. herrerae**_
58. Blade-margin irregularly cut.
65. Base tuberous; leaf single. China: Kwangsi. [Fig. 8.40] .... _**B. chingii**_
65. Base non-tuberous.
66. Petioles strongly vestite.
67. Blades broadly rounded at apex. Peru. [Fig. 7.17] .... *_**B. veitchii**_
67. Blades acute.
68. Peduncle much exceeding the petioles; outer staminate tepals subacute. Peru.
69. Outer staminate tepals entire. [Fig. 8.41] .... *_**B. davisii**_
69. Outer staminate tepals serrate. [Fig. 8.39] .... _**B. herrerae**_
68. Peduncle about equaling the petioles.
70. Blades asymmetric at base. Indonesia. [Fig. 22.13] .... _**B. muricata**_
70. Blades symmetric. New Guinea. [Fig. 8.42] .... _**B. minjemensis**_
66. Petioles glabrous or glabrescent.
71. Ovary wingless, fusiform; outer staminate tepals broadly ovate; blades subsymmetric. China: Szechwan. [Fig. 8.27] .... _**B. wilsonii**_
71. Ovary alate.
72. Capsule-wings strongly unequal.
73. Blades broadly subacute; pistillate tepals 5. Hab.? [Fig. 8.43] .... _**B. morelii**_
73. Blades acuminate; pistillate tepals 3. India. [Fig. 8.44] .... _**B. dioica**_
72. Capsule-wings equal or subequal.
74. Capsule turbinate. India. [Fig. 8.45] .... _**B. tessaricarpa**_
74. Capsule broadest in the middle.
75. Larger margin-projections acute. New Guinea. [Fig. 8.46]. .... _**B. physandra**_
75. Larger margin-projections broadly rounded. Philippines.
76. Blades ~6 cm long. [Fig. 8.47] .... _**B. woodii**_
76. Blades ~14 cm long. [Fig. 8.48] .... _**B. coronensis**_

Subkey 9

1. Blades without a distinct apex, orbicular or reniform; staminate tepals 4.
2. Rhizome slender, with long internodes.
3. Pedicels very short, exceeded by the denticulate bracts. Borneo .... _**B. pyrrha**_
3. Pedicels elongate; bracts inconspicuous.
4. Basal blade-lobes overlapping, Malaya [Fig. 9.1] .... _**B. thaipingensis**_
4. Basal blade-lobes free.
5. Inflorescence much exceeding the leaves. Brazil: São Paulo. [Fig. 9.2] ...... _**B. hoehneana**_
5. Inflorescence about equaling to much shorter than the leaves.
6. Capsule-wings equal. Borneo. [Fig. 9.3] .... _**B. subnummularifolia**_
6. Capsule-wings unequal. New Guinea. [Fig. 9.4]. .... _**B. bartlettiana**_
2. Rhizome stout with short internodes.
7. Blades evenly and subdensely vestite beneath; inflorescence 4–6 times dichotomous. Brazil: Bahia.
8. Basal leaf-lobes overlapping. [Fig. 9.5] .... _**B. subacida**_
8. Basal leaf-lobes free [Fig. 7.10] .... _**B. petasitifolia**_
7. Blades glabrous beneath or vestite chiefly on the nerves.

9. Margin regularly and coarsely crenate. West Indies: Haiti. [Fig. 7.16] . . . . . . **B. rotundifolia**

9. Margins sparsely denticulate to undulate or entire.

10. Petioles to 30 cm long, glabrescent. Philippines. [Fig. 9.6] . . . . **B. alba**

10. Petioles 4–9 cm long, crisply ferruginous-pilose. Malaya [Fig. 7.11] . . . . **B. nurii**

1. Blades with a distinct apex, the midnerve longer than the laterals.

11. Blades symmetric or subsymmetric.

12. Inflorescence with a central axis or none (at least in the pistillate, *B. wenzelii*), not dichotomous at base, irrespective of the pedicels.

13. Capsule-wings very unequal.

14. Blades ovate.

15. Blades subentire, truncate or retuse at base. Ecuador. [Fig. 9.7] . . . . **B. secunda**

15. Blades duplicate-dentate, cordate. Nepal . . . . **B. flagellaris**

14. Blades narrowly rhombic. Central America: Panama. [Fig. 9.8] . . . . **B. buseyi**

13. Capsule-wings subequal.

16. Capsule-wings oblong-lanceolate, acuminate. Malaya . . . . **?B. yappii**

16. Capsule-wings rounded.

17. Capsule-wings very narrow. West Africa: São Tomé . . . . **?B. thomeana**

17. Capsule-wings broadly crescentiform. Philippines. [Fig. S10] . . . . **B. wenzelii**

12. Inflorescence dichotomous at base.

18. Base of blade deeply cordate.

19. Petioles and nerves of blades beneath red-pilose.

20. Staminate tepals 2; blades 80 cm wide. Madagascar. [Fig. 9.9] . . . . **B. francoisii**

20. Staminate tepals 4; blades 6 cm wide. Siam. [Fig. 8.7] . . . . **?B. putii**

19. Petioles nearly or completely glabrous.

21. Petioles completely glabrous. China: Yunnan. [Fig. 9.10] . . . . **B. asperifolia**

21. Petioles with a ring of trichomes at apex. Indonesia: near Sumatra . . . . **B. sublobata**

18. Base of blade shallowly cordate to truncate or broadly rounded.

22. Margin doubly or irregularly dentate or serrate.

23. Blades acuminate; inflorescence once dichotomous. Malaya. [Fig. 8.16] . . . . . . **B. forbesii**

23. Blades triangular-acute; inflorescence 2–3 times dichotomous. New Guinea. [Fig. 9.11] . . . . **B. kaniensis**

22. Margin regularly cut to undulate or entire.

24. Base of blade truncate; blade 22–26 cm wide. Malaya. [Fig. 8.15] . . . . **B. rheifolia**

24. Base of blade shallowly cordate to broadly rounded.

25. Peduncle bearing lanceolate trichomes; blades acuminate. Malaya [Fig. 8.13] . **B. klossii**

25. Peduncle glabrous or with filamentous trichomes. Brazil.

26. Branches and petioles fulvous-lanuginose. Bahia. [Fig. 9.12] . . . . **B. epibaterium**

26. Branches and petioles glabrous. Rio de Janeiro.

27. Blades very broadly ovate, almost as broad as long. [Fig. 9.13] . . . . . **B. solananthera**

27. Blades much longer than broad.

28. Petioles and peduncles shorter than the blades. Brazil: Rio de Janeiro [Fig. 9.14] . . . . **B. radicans**

28. Petioles and peduncles more than twice as long as the blades.

29. Blades ovate, acuminate, cordate at base, about twice as long as wide. Central America: Guatemala. [Fig. S11] . . . . **B. trichosepala**

29. Blades lanceolate, narrowly triangular above, rounded at base, three times as long as wide. Mexico [Fig. S12] . . . . **B. reptans**

11. Blades strongly asymmetric.
 30. Inflorescence with a central axis or none, irrespective of the pedicels.
  31. Margins closely duplicate-dentate or serrate.
   32. Staminate tepals 2; tepals yellow; ovary wingless. West Africa: Fernando Po. [Fig. 5.17] .... *_B. prismatocarpa_
   32. Staminate tepals 4; petioles vestite.
    33. Peduncles much shorter than the petioles. Hong Kong. [Fig. 9.15] .... *_B. bowringiana_
    33. Peduncles equaling to exceeding the petioles
     34. Basal sinus free. China: Szechwan. [Fig. 9.16] .... _B. houttuynioides_
     34. Basal sinus covered by overlapping lobes. Indonesia: Borneo, Java, Sumatra. [Fig. 2.37] .... _B. mollis_
  31. Margins remotely serrate and undulate to entire.
   35. Blade strongly cordate at base; fruit wingless. West Africa: Cameroon. [Fig. 9.17] .... _B. ndongensis_
   35. Blade cuneate to retuse at base.
    36. Inflorescence narrowly paniculate.
     37. Blade rounded to retuse at base. Siam. [Fig. 9.18] .... _B. vagans_
     37. Blade cuneate at base. Central America: Panama [Fig. 9.8] .... _B. buseyi_
    36. Inflorescence short, few-flowered.
     38. Fruit wingless, fusiform: indument stellate. West Africa: Gabon. [Fig. 9.19] .... _B. wilczekiana_
     38. Fruit broadly alate. Philippines.
      39. Blades rounded at base, ~8 cm long. [Fig. 9.20] .... _B. gracilipes_
      39. Blades retuse at base, ~15 cm long. [Fig. 9.21] .... _B. megacarpa_
 30. Inflorescence dichotomous at base.
  40. Margin duplicate-serrate or irregularly cut.
   41. Petioles 8–18 cm long, shorter than the peduncles.
    42. Outer staminate tepals crisp-pilose. (_B. crispula_ Yü, non Brade.) China: Yunnan .... _B. cirrosa_
    42. Outer staminate tepals glabrous. (_B. monticola_ Ridley, non C.DC.) Malaya [Fig. 8.14] .... ?_B. alpina_
   41. Petioles 5–9.5 cm long, longer than the peduncles.
    43. Blades subequally cordate; peduncle glandular-pilose. Siam. [Fig. 8.7] .... ?_B. putii_
    43. Blades obliquely cordate; peduncle pilose. China: Yunnan. [Fig. 9.22] .... _B. anceps_
  40. Margin regularly cut to entire.
   44. Blades broadly rounded at base, acuminate. Malaya. [Fig. 8.13] .... _B. klossii_
   44. Blades obliquely to laterally cordate.
    45. Blades rounded-subacute, deeply cordate. Philippines. [Fig. 9.23] .... _B. trichochila_
    45. Blades acuminate, shallowly cordate.
     46. Blades subdimidiate. Indonesia: Sumatra .... _B. trichopoda_
     46. Blades free at base. Guatemala. [Fig. 9.24] .... _B. confusa_

Subkey 10

1. Internodes short and stout, much shorter than the petioles.
 2. Blades (mature) entire or subentire or slightly undulate. Brazil.
  3. Ovary 4–5-celled; wings sharply triangular. Bahía. [Fig. 10.1] .... *_B. schlumbergerana_

3. Ovary 3-celled.

4. Staminate tepals 2; internodes covered by stipules. Minas Gerais. [Fig. 10.2] . . . . . . ***B. grisea***

4. Staminate tepals 4.

5. Petioles glabrous. Rio de Janeiro [Fig. 10.3] . . . . ***B. acetosa***

5. Petioles strongly vestite.

6. Blades symmetric. Bahia. [Fig. 7.10] . . . . ***B. petasitifolia***

6. Blades asymmetric. Rio de Janeiro. [Fig. 10.4] . . . . ***B. acida***

2. Blades distinctly cut.

7. Staminate tepals 5 or 6. Argentina. [Fig. 10.5] . . . . ***B. sleumeri***

7. Staminate tepals 4.

8. Blades shallowly cordate: capsule-wings triangular, spreading. Burma. [Fig. 7.22] . . . . ***B. tricuspidata***

8. Blades deeply cordate.

9. Basal lobes of blades overlapping. Sumatra . . . . ***B. orbiculata***

9. Basal lobes of blades free.

10. Petioles stout, pilose, over 5 cm long. Peru. [Fig. 7.17] . . . . ***B. veitchii***

10. Petioles slender, subglabrous, to 2 cm long. Siam. [Fig. 7.13] . . . . ***B. saxifragifolia***

1. Internodes long and slender.

11. Blades strongly asymmetric; petioles glabrous or glabrescent.

12. Margins minutely denticulate; ovary glandular-pubescent. India. [Fig. 10.6] . . . . . ***B. alicida***

12. Margins coarsely dentate; ovary glabrous. (*B. reniformis* Vell., non Dryand.) Brazil: Rio de Janeiro. [Fig. 3.24] . . . . ***B. fabulosa***

11. Blades symmetric or nearly so.

13. Inflorescence dichotomous at base.

14. Staminate tepals 2. Burma.

15. Ovary 3-celled, wingless [Fig. 10.7] . . . . ***B. delicatula***

15. Ovary 2-celled . . . . ***B. flaccidissima***

14. Staminate tepals 4.

16. Blades entire or subentire.

17. Capsule-wings unlike, the larger triangular, the two smaller rounded marginiform; ovary 3-celled. Burma. [Fig. 10.8] . . . . ***B. fibrosa***

17. Capsule-wings all sharply angled; ovary 2-celled. India, Andaman Island, Burma . . . . ?***B. andamensis***

16. Blades coarsely cut.

18. Cauline leaves petiolate. Burma, Singapore . . . . ***B. parvuliflora***

18. Cauline leaves sessile. India. [Fig. S13] . . . . ***B. parishii***

13. Inflorescence not dichotomous at base; axis central or none.

19. Flowers numerous; inflorescences well developed.

20. Inflorescences amply paniculate; tepals free. Mexico. [Fig. 10.9] . . . . ***B. uruapensis***

20. Inflorescences racemose; pistillate tepals connate. New Guinea. [Fig. 10.10] . . . . ***Symbegonia hirta***

19. Flowers single or few; axis small or none.

21. Bracts small, entire, glabrous, often deciduous.

22. Styles and ovary cells 2. Malaya. [Fig. 10.11] . . . . ***B. sibthorpioides***

22. Styles and ovary cells 3.

23. Stem less than 2 cm long; staminate tepals to 4.5 mm long. Siam. [Fig. 7.13] . . . . ***B. saxifragifolia***

23. Stem elongate, often branched; staminate tepals to 15 mm long. Mexico. [Fig. 10.12] . . . . *B. uniflora*
21. Bracts large, persistent, variously cut or densely ciliate.
24. Blades coarsely dentate as well as sublobate. Peru. [Fig. 10.13] . . . . *B. geraniifolia*
24. Blades entire or subentire except for the broad, obtuse projections.
25. Plant wholly purple; blades obliquely reniform; outer pistillate tepals 4 mm long, purple. West Indies: Haiti. [Fig. 10.14] . . . . *B. brachyclada*
25. Plant green; blades suborbicular; outer pistillate tepals 2 mm long. Brazil: Goiás. [Fig. 10.15] . . . . *B. leptophylla*

Subkey 11

1. Inflorescence with a central axis or none, not dichotomous at base.
2. Inflorescence unisexual, the pistillate 3-flowered.
3. Peduncle short or none. West Africa: Congo. [Fig. 11.1] . . . . **B. horticola*
3. Peduncle elongate. Nepal . . . . *B. leptoptera*
2. Inflorescence bisexual.
4. Petioles vestite.
5. Bracts and stipules fimbriate, persistent; inflorescences in part axillary; tepals 3–8 mm long; base fibrous. North and South America. [Fig. 11.2] . . . . **B. fischeri*
5. Bracts and stipules crenate to entire or deciduous.
6. Base fibrous; blades duplicate-crenulate. Cuba. [Fig. 11.3] . . . . *B. libanensis*
6. Base a tuber or stout rhizome.
7. Tepals 3–4 mm long. Burma. [Fig. 11.4] . . . . *B. martabanica*
7. Tepals 14–40 mm long.
8. Staminate tepals subequal, 40 mm long. Bolivia. [Fig. 11.5] . . . . *B. baumannii*
8. Staminate tepals very unequal, the outer ones 27 mm long. India. [Fig. 11.6] . . . . *B. phrixophylla*
4. Petioles glabrous or glabrescent.
9. Capsule-wings equal, narrowly triangular. Burma. [Fig. 11.7] . . . . *?B. triradiata*
9. Capsule-wings unequal.
10. Blades broader than long, sublobate; inflorescence racemose.
11. Blades to 5 cm wide, coarsely dentate. India. [Fig. 11.8] . . . . *B. canarana*
11. Blades to 12 cm wide, obscurely dentate. Siam [Fig. 11.9] . . . . *B. cardiophora*
10. Blades longer than broad.
12. Margin entire; largest capsule-wing subtriangular, obtuse, about as wide as high. Madagascar. [Fig. 7.2] . . . . *B. antongilensis*
12. Margin dentate; largest capsule-wing narrowly triangular, much wider than high. India: Nepal. [Fig. 2.23] . . . . *B. rubella*
1. Inflorescence dichotomous or trichotomous at base.
13. Margins densely and irregularly cut.
14. Petioles strongly vestite.
15. Petioles glandular pubescent. Siam. [Fig. 8.7] . . . . *?B. putii*
15. Petioles not glandular.
16. Bracts fimbriate; inflorescence few-flowered. North and South America. [Fig. 11.2] . . . . **B. fischeri*

16. Bracts entire.
17. Blades subsessile; inflorescence few-flowered. Indonesia: Sumatra . . . . ***B. pilosa***
17. Blades petiolate; inflorescence to 5 times dichotomous. Brazil: Rio de Janeiro. [Fig. 11.10] . . . . ***B. fagifolia***
14. Petioles glabrous or glabrescent.
18. Capsule-wings equal or subequal.
19. Capsule-wings narrowly triangular, spreading. Burma. [Fig. 11.7] . . . . ***B. triradiata***
19. Capsule-wings obtuse.
20. Upper wing-margin deflexed. Burma. [Fig. 11.11] . . . . ***B. surculigera***
20. Upper wing-margin nearly horizontal. India. [Fig. 11.12] . . . . ***B. trichocarpa***
18. Capsule-wings strongly unequal.
21. Ovary 2-celled.
22. Blades ovate, obtuse. India. [Fig. 11.8] . . . . ***B. canarana***
22. Blades triangular-ovate. (*B. macgregorii* W.W. Smith, non Merrill.) Burma . . ***B. burmensis***
21. Ovary 3-celled.
23. Smaller capsule-wings acute above; largest narrowly triangular ascending, much wider than high. Burma, Singapore . . . . ***B. parvuliflora***
23. Smallest capsule-wing rounded, narrowly marginiform; largest capsule-wing subtriangular; third intermediate. Madagascar. [Fig. 11.13] . . . . ***B. betsimisaraka***
13. Margins regularly cut to entire.
24. Petioles strongly vestite.
25. Fruit wingless. West Africa.
26. Staminate tepals 2. São Tomé. [Fig. 11.14] . . . . ****B. baccata***
26. Staminate tepals 4. Congo. [Fig. 11.1] . . . . ****B. horticola***
25. Fruit alate.
27. Capsule-wings equal, narrowly triangular, spreading. Burma. [Fig. 7.22] . . ***B. tricuspidata***
27. Capsule-wings unequal.
28. Inflorescence twice dichotomous; stipules and blades entire. Madagascar . . . ***B. tsimihety***
28. Inflorescence once dichotomous.
29. Smaller capsule-wings triangular, their upper margins nearly horizontal. India. [Fig. 11.15] . . . . ***B. satrapis***
29. Smaller capsule-wings semiorbicular. Cuba. [Fig. 11.3] . . . . ***B. libanensis***
24. Petioles glabrous or glabrescent.
30. Inflorescence at least partly axillary.
31. Inflorescences unisexual, the staminate many-flowered; indument of lacerate scales. West Africa: Congo. [Fig. 11.1] . . . . ****B. horticola***
31. Inflorescences bisexual; indument of hairs or lacking.
32. Stem to 10 cm long. Southeast Asia.
33. Blade deltoid, to 9 cm long. Siam. [Fig. 11.16] . . . . ***B. demissa***
33. Blade deeply cordate; ovary 2-celled. Burma, Malaya. [Fig. 11.17] . . . . ***B. prolifera***
32. Stem elongate (probably only its branches erect); blades shallowly cordate to broadly rounded at base. Brazil: Rio de Janeiro.
34. Blades very broadly ovate, nearly as wide as long, pubescent on the nerves beneath. [Fig. 9.13] . . . . ***B. solananthera***
34. Blades much longer than broad. [Fig. 9.14] . . . . ***B. radicans***
30. Inflorescences terminal only.

35. Ovary 2-celled; base tuberous. Asia.

36. Blades shallowly lobate. China: Yunnan. [Fig. 11.18] .... ***B. psilophylla***

36. Blades unlobed. India. [Fig. 8.18] .... ***B. crenata***

35. Ovary 3-celled.

37. Blades subentire, 27–34 cm long. Malaya. [Fig. 8.15] .... ***B. rheifolia***

37. Blades serrate or dentate, 2–10 cm long.

38. Blades acute or obtuse; inflorescence 4–8-flowered. India. [Fig. 8.19] .... ***B. ovatifolia***

38. Blades acuminate; inflorescence once trichotomous, ~12-flowered. Madagascar. [Fig. 11.19] .... ***B. erminea***

Subkey 12

1. Inflorescence with a central axis or none, not dichotomous at base.

2. Petioles strongly vestite.

3. Peduncles much shorter than the petioles.

4. Blades obtuse to broadly rounded; base of plant multituberous. Siam .... ***B. notata***

4. Blades acute or acuminate.

5. Margins crenate; bracts and bracteoles persistant, ample; peduncle short or none. Colombia, Ecuador. [Fig. 12.1] .... ***B. tiliifolia***

5. Margins duplicate-serrate; bracts and bracteoles inconspicuous; peduncle evident. China: Hainan, Kwantung, Fokien. [Fig. 9.15] .... ***B. bowringiana***

3. Peduncles about equaling the petioles to much longer.

6. Staminate tepals 2; blades shallowly cordate to cuneate.

7. Blades remotely serrate; tepals white; fruit alate. New Guinea. [Fig. 12.2] .... ***B. pentaphragmifolia***

7. Blades duplicate-serrate; tepals yellow; fruit wingless, 4-angled. West Africa: Fernando Po. [Fig. 5.17] .... ***B. prismatocarpa***

6. Staminate tepals 4.

8. Tepals acute, bright red.

9. Capsule-wings triangular, serrate; outer staminate tepals serrate. Peru, Bolivia. [Fig. 8.39] .... ***B. herrerae***

9. Capsule-wings rounded, entire; outer staminate tepals entire. Ecuador. [Fig. 8.38] .... ***B. froebelii***

8. Tepals rounded, white.

10. Petioles and peduncles much exceeding the internodes; blades dark-spotted. India. [Fig. 12.3] .... ***B. picta***

10. Petioles and peduncles much shorter than the internodes; blades concolorous. North and South America. [Fig. 11.2] .... ***B. fischeri***

2. Petioles glabrous or glabrescent.

11. Inflorescences terminal only.

12. Blades strongly cordate.

13. Blades with narrowly triangular apical half or more. China: Yunnan. [Fig. 12.4] .... ***B. yunnanensis***

13. Blades ovate with broadly acute to acuminate apex.

14. Largest capsule-wing about as high as wide; blades wider than long, broadly acute. India. [Fig. 11.8] .... ***B. canarana***

14. Largest capsule-wing much wider than high.

15. Stem very short. India. [Fig. 12.5] . . . . ***B. brevicaulis***

15. Stem elongate. Nepal. [Fig. 2.23] . . . . ***B. rubella***

12. Blades very shallowly if at all cordate.

16. Blades as wide or wider than long, sublobate; inflorescence elongate, racemose. Siam. [Fig. 11.9] . . . . ***B. cardiophora***

16. Blades distinctly longer than wide.

17. Blades ovate-acuminate. West Africa. São Tomé. [Fig. 12.6] . . . . ***B. macambrarensis***

17. Blades narrowly triangular-ovate.

18. Plant terrestrial, tuberous, low. Nepal. [Fig. 12.7] . . . . ***B. minicarpa***

18. Plant epiphytic, the branches erect. (*B. elegans* Elmer, non H.B.K.) Philippines. [Fig. 4.53] . . . . ***B. sarmentosa***

11. Inflorescences partly or all lateral.

19. Inflorescences leaf-opposed.

20. Blade dimidiate with one side adnate to the petiole; staminate tepals 2. Indonesia: Sumatra. [Fig. 8.10] . . . . ?***B. horsfieldii***

20. Blade not dimidiate; staminate tepals 4. Africa: Congo. [Fig. 12.8] . . . . ***B. meyeri-johannis***

19. Inflorescences axillary.

21. Bracts deciduous.

22. Blades strongly cordate.

23. Bracts ample; fruit equally 3-horned. (*B. crassicaulis* Warburg, non Lindley.) Indonesia: Java? [Fig. 1.1] . . . . ?***B. pachyrhachis***

23. Bracts minute; fruit unequally 3-winged. India: Nepal. [Fig. 2.23] . . . . ***B. rubella***

22. Blades rounded or retuse at base.

24. Stem shorter than the petioles. China: Hainan. [Fig. 12.9] . . . . ***B. howii***

24. Stem longer than the petioles. Peru. [Fig. 12.10] . . . . ***B. brevicordata***

21. Bracts persistent; staminate tepals 4.

25. Petioles 7 mm long; fruit wingless. New Guinea. [Fig. 12.11] . . . . ***B. axillipara***

25. Petioles 5–8 cm long.

26. Blades crenate, broadly rounded-ovate. East Africa: Tanganyika. [Fig. 12.12] . . . . ***B. wakefieldii***

26. Blades coarsely and irregularly serrate, triangular-ovate to oblong. India. [Fig. 5.6] . . . . ***B. gemmipara***

1. Inflorescence dichotomous or trichotomous at base.

27. Petioles strongly vestite.

28. Blades irregularly or doubly dentate or serrate.

29. Stem shorter than the longest petioles.

30. Blades acuminate; internode single. China: Yunnan. [Fig. 9.10] . . . . ?***B. asperifolia***

30. Blades obtuse or broadly rounded; internodes several. Siam . . . . ***B. notata***

29. Stem longer than the petioles.

31. Blades broadly acute; trichomes stellate. India to Malaya. [Fig. 3.40] . . . . ***B. sinuata***

31. Blades acuminate.

32. Bracts fimbriate, ovate (var. *klugii*). Ecuador, Peru. [Fig. 11.2] . . . . ***B. fischeri***

32. Bracts entire, linear, attenuate.

33. Peduncle very short; staminate tepals 2. Sumatra . . . . ?***B. fasciculata***

33. Peduncle 25 mm or longer. China: Yunnan.

34. Stipules obovate-oblong, 5–6 mm long, deciduous; capsule 3-celled. [Fig. 9.22] . . . . . . ***B. anceps***
34. Stipules narrow, acute, ~25 mm long; capsule 2-celled. [Fig. 12.13] . . . . ***B. cathayana***
28. Blades regularly cut to subentire.
35. Blades dimidiate, attached to the petiole on one side. Indonesia: Sumatra . . . ***B. trichopoda***
35. Blades not dimidiate.
36. Inflorescence many-flowered, several times dichotomous; peduncles exceeding the petioles.
37. Petiole-trichomes filiform, simple.
38. Blades obliquely cordate, acute; stipules oblong, glabrous. Venezuela. [Fig. 12.14] . . . . . . ****B. scabridoidea***
38. Blades broadly rounded at base, acuminate; stipules ovate, setose. Philippines. [Fig. 12.15] . . . . . . ***B. angilogensis***
37. Petiole-trichomes flat or stellate.
39. Petiole-trichomes stellate. India to Malaya. [Fig. 3.40] . . . . . . ***B. sinuata***
39. Petiole-trichomes ligulate, lacerate. ?Philippines . . . . . . ***B. oxysperma***
36. Inflorescence few-flowered, mostly once dichotomous.
40. Stem much shorter than the petioles; blades strongly cordate.
41. Peduncle ~15 cm long, about equaling the petiole. China: Yunnan. [Fig. 9.10] . . . . . . ***B. asperifolia***
41. Peduncle 3.5 cm long, about half the petiole. Siam. [Fig. 8.7] . . . . . . ***?B. putii***
40. Stem about equaling to much exceeding the petioles.
42. Blades rounded or emarginate at base; petioles pilose. Cuba.
43. Petioles 3–8 mm long. [Fig. 12.16] . . . . . . ***B. cubensis***
43. Petioles 20–35 mm long. [Fig. 11.3] . . . . . . ***?B. libanensis***
42. Blades distinctly cordate at base.
44. Staminate tepals 2; blades suborbicular, apiculate. Mexico. [Fig. 12.17] . . . . . . ***B. alice-clarkiae***
44. Staminate tepals 4; blades ovate, obtuse or subacute.
45. Ovary 2-celled; stem ascending to repent, slender. Malaya. [Fig. 12.18] . . . ***B. guttata***
45. Ovary 3-celled; stem erect, stout.
46. Leaves apical. Philippines. [Fig. 12.19] . . . . . . ****B. wadei***
46. Leaves distributed along the stem. Cuba. [Fig. 30.33] . . . . . . ***B. wrightiana***
27. Petioles sparsely pubescent to glabrous.
47. Blades dimidiate with one side adnate to the petiole; staminate tepals 2. Indonesia: Sumatra. [Fig. 8.10] . . . . . . ***?B. horsfieldii***
47. Blades not dimidiate.
48. Blades strongly cordate.
49. Inflorescence terminal only.
50. Blades duplicate-dentate, acuminate. China: Yunnan. [Fig. 9.10] . . . . . . ***?B. asperifolia***
50. Blades crenate, broadly acute. India. [Fig. 8.18] . . . . . . ***B. crenata***
49. Inflorescence at least partly axillary.
51. Peduncles much shorter than the petioles.
52. Ovary equally 3-horned. (*B. crassicaulis* Warburg, non Lindley.) Java? [Fig. 1.1] . . . . . . ***?B. pachyrhachis***
52. Ovary unequally 3-winged. Mexico. [Fig. 12.20] . . . . . . ***B. rhodochlamys***
51. Peduncles exceeding the petioles.

53. Stem branched. Eastern China. [Fig. 12.21] .... ***B. grandis***

53. Stem simple.

54. Petioles exceeding the stem. China: Yunnan .... ***B. yui***

54. Petioles much shorter than the stem. India. [Fig. 2.23] .... ?***B. rubella***

48. Blades shallowly cordate to broadly rounded at base.

55. Staminate tepals 2.

56. Pistillate inflorescence sessile at the base of the staminate peduncle; stipules fimbriate, persistent. Borneo. [Fig. 12.22] .... ***B. inostegia***

56. Pistillate inflorescence long-pedunculate; stipules entire, deciduous. Peru. [Fig. 12.10] .... ***B. brevicordata***

55. Staminate tepals 4.

57. Blades doubly dentate or serrate at least toward apex.

58. Internodes very short and stout; blades entire toward base. China: Hainan. [Fig. 12.9] .... ***B. howii***

58. Internodes long and slender.

59. Stem of a single internode, about equaling the basal petiole. Burma, Singapore .... ***B. parvuliflora***

59. Stem of several internodes, much exceeding the largest petiole. Paraguay. [Fig. 12.23] .... ***B. obovatistipula***

57. Blades uniformly cut to subentire.

60. Ovary 2-celled; stem suberect or ascending; filaments fused in a column. Malaya [Fig. 12.24] .... ?***B. carnosula***

60. Ovary 3-celled.

61. Leaves clustered at the apex of a straight, stout stem; inflorescences terminal. Philippines. [Fig. 12.19] .... ****B. wadei***

61. Leaves distributed along a slender stem; inflorescences at least partly axillary.

62. Blades broadly rounded or subacute; stipules large, elliptic, persistent. South America, elsewhere naturalized. [Fig. 12.25] .... ****B. cucullata***

62. Blades acuminate; stipules quickly deciduous. Brazil: Rio de Janeiro. [Fig. 12.26] .... ***B. integerrima***

Subkey 13

1. Staminate tepals 2.

2. Blades asymmetric.

3. Base of blade broadly cuneate. West Africa: Guinea. [Fig. 13.1] .... ***B. peperomioides***

3. Base of blade obliquely cordate. Mexico. [Fig. 13.2] .... ***B. plantaginea***

2. Blades symmetric; pistillate inflorescence sessile, one-flowered; staminate flowers fascicled at the apex of the peduncle. Brazil.

4. Base of blade rounded. Rio de Janeiro. [Fig. 13.3] .... ***B. depauperata***

4. Base of blade cuneate.

5. Blades ciliate.

6. Blades distinct; petiole rather narrow. Rio de Janeiro.

7. Blades entire, spotted. [Fig. 13.4] .... ***B. velloziana***

7. Blades serrulate. [Fig. 13.5] .... ***B. attenuata***

6. Blades passing gradually into the winged petiole.

8. Blades glabrous. Rio de Janeiro. [Fig. 13.6] .... ***B. herbacea***
8. Blades densely pubescent. São Paulo. [Fig. 13.7] .... ***B. fulvo-setulosa***
5. Blades not ciliate, completely glabrous; entire or microscopically serrulate. Rio de Janeiro.
9. Bracts and tepals entire. [Fig. 13.8] .... ***B. lanceolata***
9. Bracts and pistillate tepals lacerate-serrulate. [Fig. 13.9] .... ***B. angraënsis***
1. Staminate tepals 4.
10. Blades asymmetric or somewhat cordate.
11. Petioles 0–12 mm long; blades doubly serrate. Burma. [Fig. 13.10] .... ***B. nivea***
11. Petioles 3–13 cm long.
12. Fruit wingless. West Africa: Liberia. [Fig. 13.11] .... ***B. fusicarpa***
12. Fruit alate. Malaya. [Fig. 13.12] .... ***B. perakensis***
10. Blades symmetric, cuneate at base.
13. Blade decurrent. Malaya. [Fig. 13.13] .... ***B. rhoephila***
13. Blade broadly cuneate, not decurrent.
14. Margin densely duplicate-dentate or serrate, ciliate; capsule-wings very unequal.
15. Inflorescence unbranched, the few flowers fascicled at the apex of the peduncle; base a tuber; blades glabrous. Madagascar. [Fig. 13.14] .... ***B. nana***
15. Inflorescence at least once dichotomous; base a rhizome; blades hispid. Malaya. [Fig. 13.15] .... ***B. scortechinii***
14. Margin repand-denticulate to subentire.
16. Margin repand-denticulate; inflorescence one-flowered or racemose; ovary 3-celled. Madagascar. [Fig. 13.16] .... ***B. warpurii***
16. Margin subentire.
17. Fruit wingless, 3-celled. West Africa: Gabon. [Fig. 13.17] .... ***?B. squamulosa***
17. Fruit alate, 2-celled. Malaya.
18. Blades elliptic, 14–17 cm long, 6–8 cm wide .... ***B. aequilateralis***
18. Blades oblong-elliptic, 14–21 cm long, 4–6 cm wide. [Fig. 13.18] .... ***B. collina***

Subkey 14

1. Blades symmetric.
2. Inflorescence racemose or one-flowered.
3. Staminate tepals 4; inflorescence racemose; blades serrate. Brazil: Rio de Janeiro. (*B. scandens* Vell., non Sw.) [Fig. 14.1] .... ***B. cerasiphylla***
3. Staminate tepals 2.
4. Inflorescences racemose. New Guinea. [Fig. 14.2] .... ***?B. albobracteata***
4. Inflorescences one-flowered; fruit wingless, globose. Tropical West Africa: Cameroon [Fig. S41] .... ***B. bonus-henricus***
2. Infloresence dichotomous or umbelliform at base; staminate tepals 4.
5. Ovary and capsule broad, alate. America, Asia, Indonesia.
6. Blades cuneate at base.
7. Petioles 6–8 mm long. Brazil: Rio de Janeiro to Rio Grande do Sul; Argentina. [Fig. 14.3] .... ***B. fruticosa***
7. Petioles 5–17 cm long. Malaya.
8. Blades hispid on both sides. [Fig. 13.15] .... ***B. scortechinii***
8. Blades glabrous above .... ***B. aequilateralis***
6. Blades rounded or cordate at base.

9. Petioles densely vestite. Brazil.

10. Blades elliptic, about twice as long as wide. Bahía. [Fig. 9.12] . . . . **B. epibaterium**

10. Blades linear-oblong, ~4 times as long as wide. State? [Fig. 14.4] . . . . ***B. parilis**

9. Petioles glabrous or glabrescent.

11. Margins densely dentate; petioles 4–15 cm long; inflorescence once dichotomous.

12. Branches simple, short. Philippines. [Fig. 14.5] . . . . ?**B. lancilimba**

12. Branches elongate cincinii. Malaya. [Fig. 13.12] . . . . **B. perakensis**

11. Margins entire or laxly undulate-dentate.

13. Petioles 15–20 cm long; blade entire; ovary 2-celled. Malaya. [Fig. 14.6] . **B. tampinica**

13. Petioles to 8 cm long; blades entire to undulate-dentate; ovary 3-celled. America.

14. Inflorescence 2–3 times dichotomous; largest capsule-wing about as wide as high; stipules deciduous. Brazil: Rio de Janeiro to Santa Catarina. [Fig. 9.14] . . . . **B. radicans**

14. Inflorescence 4–5 times dichotomous; largest capsule wing much wider than high; stipules persistent. Mexico and West Indies to Guiana and Bolivia. [Fig. 14.7] . . . . **B. glabra**

5. Ovary and fruit fusiform to globose wingless. Africa.

15. Petioles strongly vestite; infloresence umbelliform.

16. Blades linear, narrowly cuneate; staminate tepals 2. Gabon. [Fig. 14.8] . . . **B. vittariifolia**

16. Blades oblong-elliptic, broad-based; staminate tepals 4.

17. Petioles pubescent. Liberia. [Fig. 13.11] . . . . **B. fusicarpa**

17. Petioles stellate-lepidote.

18. Blades cordate; inflorescence 3-flowered. Congo, Uganda. [Fig. 14.9] . . . . **B. tatoniana**

18. Blades broadly rounded to broadly cuneate; inflorescence many-flowered. Guinea to Congo. [Fig. 13.17] . . . . **B. squamulosa**

15. Petioles sparsely vestite to glabrous.

19. Blades broadly elliptic or oblong-elliptic, less than 3 times as long as wide.

20. Petioles less than 1 cm long; inflorescences unisexual. Gabon. [Fig. 14.10] . . . . **B. lethomasiae**

20. Petioles 1–8 cm long.

21. Inflorescences unisexual. Liberia, Cameroon, Congo. [Fig. 14.11] . . **B. gracilipetiolata**

21. Inflorescences bisexual. Cameroon. [Fig. 14.12] . . . . **B. rubro-marginata**

19. Blades narrowly elliptic or lanceolate, more than 3 times as long as wide.

22. Petioles maximally 10–15 mm long.

23. Plant completely glabrous. Gabon. [Fig. 14.13] . . . . **B. nicolai-hallei**

23. Plant partly lepidote. Congo. [Fig. 14.14] . . . . **B. rubronervata**

22. Petioles maximally 60–120 mm long.

24. Petioles slender 6–12 cm long; blades papyraceous, 6–13 cm long, 2–3 cm wide; staminate inflorescences 2–4-flowered; stamens ~36. Gabon, Congo. [Fig. 14.15] . . . . **B. elaeagnifolia**

24. Petioles stout, 2–6.5 cm long; blade subcoriaceous, 9–22 cm long, 2–4.5 cm wide; staminate inflorescences 5–8-flowered; stamens ~50.
Fernando Po, Cameroon, Congo. [Fig. 14.16] . . . . **B. gladiifolia**
Cameroon. [Fig. 14.17] . . . . **B. crassipes**

1. Blades asymmetric.

25. Blades more or less inequilateral throughout, not more so at base.

26. Margins entire or undulate.

27. Blades broadly elliptic or oblong-elliptic, slightly more than twice as long as wide at most.

28. Ovary wingless. Africa.

29. Blades broadly rounded and apiculate, strongly inequilateral with one side nearly twice as wide as the other. Tropical East Africa: Tanganyika. [Fig. 14.18] . . . . ***B. zimmermannii***

29. Blades narrowly triangular at apex, only slightly inequilateral. Tropical West Africa.

30. Plant monoecious; stamens lax, unilateral. Tropical East and West Africa. [Fig. 14.19] . . . . ***B. eminii***

30. Plant dioecious; stamens dense, forming a perfect cone. Guinea to Congo. [Fig. 14.20] . . . . ***B. mannii***

28. Ovary alate.

31. Blades cordate; plant glabrous. Brazil: Rio de Janeiro. [Fig. 14.21] . . . . ***B. declinata***

31. Blades rounded or cuneate at base.

32. Inflorescence amply dichotomous, lax; blades obovate, broadest above the middle. Brazil: Bahía. [Fig. 14.22] . . . . ***B. smilacina***

32. Inflorescence densely few-flowered.

33. Internodes slender, longer than the deciduous stipules; petioles to 1.5 cm long. Indonesia: Sumatra. [Fig. 14.23] . . . . ***B. aberrans***

33. Internodes stout, shorter than the persistent stipules; petioles 8–16 cm long. Tropical West Africa: Guinea. [Fig. 13.1] . . . . ***B. peperomioides***

27. Blades narrowly oblong-elliptic or lanceolate, more than 3 times as long as wide.

34. Petioles densely and persistently hispid, 5–10 mm long; ovary alate. Borneo. [Fig. 14.24] . . . . ***B. lunatistyla***

34. Petioles sparsely stellate-lepidote to glabrous. Tropical West Africa.

35. Petioles 30–60 mm long; blades rounded at base, 40–65 mm wide. Liberia. [Fig. 13.11] . . . . ***B. fusicarpa***

35. Petioles 2–15 mm long; blades 4–25 mm wide.

36. Plant completely glabrous. Gabon. [Fig. 14.13] . . . . ***B. nicolai-hallei***

36. Plant partly stellate-lepidote.

37. Inflorescences all bisexual with 2 lateral pistillate flowers and one staminate central. Congo.

38. Petiole 5–15 mm long; blade 3–6 times as long as wide. [Fig. 14.14] ***B. rubronervata***

38. Petiole 15–35 mm long; blade less than 3 times as long as wide. [Fig. S14] . . . . ***B. adolfi-friderici***

37. Inflorescences staminate with many flowers and bisexual with one of each. Guinea to Congo. [Fig. 14.25] . . . . ***B. polygonoides***

26. Margins distinctly serrate or dentate.

39. Petioles densely and persistently vestite, 1–14 mm long.

40. Peduncles 25–50 mm long, exceeding the leaves; blades 18 mm wide; staminate tepals 4; ovary turbinate. Venezuela. [Fig. 14.26] . . . . ***B. montana***

40. Peduncles very short or lacking; blades 16–40 mm wide.

41. Blades broadly acute and apiculate; stipules persistent. Borneo. [Fig. 14.27] ***B. pubescens***

41. Blades attenuate to caudate-asuminate.

42. Margin finely undulate-dentate; apex attenuate. Borneo. [Fig. 14.24] . . . ***B. lunatistyla***

42. Margin coarsely double-serrate; apex caudate-acuminate. Philippines. [Fig. 14.28] . . . . ***B. urdanetensis***

39. Petioles sparsely vestite to glabrous.

43. Petioles 40–150 mm long. Philippines.
 44. Internodes ~5 mm long, stout. [Fig. 14.5] .... ?***B. lancilimba***
 44. Internodes 20–30 mm long, slender [Fig. 14.28] .... ***B. urdanetensis***
43. Petioles 3–30 mm long.
 45. Blades ~20-nerved; margins closely and regularly serrate. Peru. [Fig. 14.29] . ***B. pilosella***
 45. Blades few-nerved; margins laxly and irregularly dentate.
  46. Internodes short and stout.
   47. Petioles lacking; blades sessile; stipules persistent. Borneo. [Fig. 14.30] ... ***B. hullettii***
   47. Petioles 25 mm long; stipules deciduous, unknown. Tropical West Africa: Cameroon. [Fig. 14.31] .... ?***B. squamulosa***
  46. Internodes long and slender, longer than the petioles; blades pale beneath.
   48. Inflorescences dichotomous; blades 4–8 cm long.
    49. Stipules persistent; staminate tepals 4. Brazil: Rio de Janeiro to Rio Grande do Sul; Argentina. [Fig. 14.3] .... ***B. fruticosa***
    49. Stipules deciduous; staminate tepals 2. Philippines.
     50. Petioles 5–16 mm long; peduncles 10–20 mm long. [Fig. 14.32] .... ***B. malindangensis***
     50. Petioles 20–40 mm long; peduncles 25 mm or longer [Fig. 14.33] . ***B. binuangensis***
   48. Inflorescences unbranched. Philippines.
    51. Blades 3–4 times as long as broad; capsule-wings truncate above, angled. [Fig. 14.34] .... ***B. lagunensis***
    51. Blades about twice as long as wide; capsule-wings marginiform.
     52. Blades subelliptic, laxly dentate. [Fig. 14.35]...................... ***B. aequata***
     52. Blades obovate, duplicate-serrate. [Fig. 14.36] .... ***B. parvilimba***
25. Blades much more asymmetric at base than above.
 53. Petiole-apex covered by the basal lobe of the blade.
  54. Margins entire.
   55. Petioles densely ferruginous-pilose; staminate tepals 2. Mexico. [Fig. 13.2] ***B. plantaginea***
   55. Petioles glabrous; staminate tepals 4. Philippines. [Fig. 14.37] .... ***B. gitingensis***
  54. Margins variously cut.
   56. Petioles sparsely pubescent to glabrous.
    57. Margins undulate with short broad teeth; petioles 11–14 cm long.
     58. Peduncles to 1 cm long; blades slightly inequilateral. West Africa: Cameroon. [Fig. 14.38] .... ***B. zenkerana***
     58. Peduncles 4–10 cm long; blades strongly inequilateral. Indonesia: Sumatra. [Fig. S15] .... ***B. inversa***
    57. Margins very coarsely dentate with strongly projecting teeth; petioles 1–3 cm long. Phillipines.
     59. Blades dentate mostly above the middle; inflorescence paniculate; staminate tepals 4. [Fig. 14.39] .... ***B. subprostrata***
     59. Blades strongly dentate throughout; inflorescence few-flowered; staminate tepals 2. [Fig. 6.2] .... ***B. quercifolia***
   56. Petioles densely and persistently vestite.
    60. Blade-apex narrowly triangular; blade lanceolate or elliptic.
     61. Blade-base broad with a prominent lobe.
      62. Capsule turbinate, 3-horned. Colombia. [Fig. 14.40] .... ***B. colombiana***

62. Capsule fusiform, 6-costate. West Africa: Angola. [Fig. S16] . . . . ***B. gossweileri***

61. Blade-base cuneate with a short basal lobe. Borneo. [Fig. 14.24] . . . . ***B. lunatistyla***

60. Blade-apex broad; blade obovate or elliptic-oblong.

63. Blades elliptic-oblong, broadly rounded at apex, 5 cm long; internodes short, largely covered by the persistent stipules. Cultivated. Argentina. [Fig. 14.41] . . . . . *_**B. listada**_

63. Blades obovate, apiculate or acuminate. Indonesia.

64. Blades nearly 3 times as long as wide; basal lobe ~3 cm wide. Philippines. [Fig. 14.42] . . . . ***B. macgregorii***

64. Blades about twice as long as wide; basal lobe to 1 cm wide.

65. Staminate tepals 4; bracts broadly oblong, conspicuous. Java. [Fig. 14.43] . ***B. lepida***

65. Staminate tepals 2; bracts inconspicuous. Borneo.

66. Bracts lance-oblong, entire, 3 mm long. [Fig. 14.44] . . . . ***B. longiseta***

66. Bracts reduced to pectinate bristles, 5 mm long. [Fig. 14.45] . . . . ***B. articulata***

53. Petiole-apex not covered.

67. Blades dimidiate with the base adnate to the petiole on one side.

68. Blades narrowly oblong or lanceolate, more than 3 times to more than 4 times as long as wide.

69. Margins coarsely sinuate-dentate or serrate. Indonesia.

70. Blades 8–13 cm long, caudate-acuminate. New Guinea. [Fig. 14.46] . . . . . ***B. kerstingii***

70. Blades 2–5 cm long, obtuse. Philippines. [Fig. 6.19] . . . . ***B. loheri***

69. Margins denticulate or entire. Brazil. [Fig. 14.4] . . . . *_**B. parilis**_

68. Blades elliptic or obovate, 2–3 times as long as wide.

71. Apex of blade broadly subacute and apiculate; inflorescence 4-5 times dichotomous, bisexual. Colombia. [Fig. 14.47] . . . . ***B. holtonis***

71. Apex of blade acuminate; staminate tepals 2; inflorescences mostly unisexual.

72. Blades obscurely dentate; stipules deciduous, 10–15 mm long, lanceolate, acute.

73. Stem internodes long and slender; petioles 3–4 mm long; fruit slenderly cylindric, wingless. West Africa: Cameroon. [Fig. 14.48] . . . . ***B. jussiaeicarpa***

73. Stem internodes short and thick; petioles 10–16 cm long; capsule unequally trialate. Malaya. [Fig. S17] . . . . ***B. herveyana***

72. Blades prominently dentate; stipules persistent, 5–9 mm long. Indonesia.

74. Pistillate tepals 5, free. Borneo. [Fig. 14.49] . . . . ***B. pleioclada***

74. Pistillate tepals connate, campanulate. New Guinea. [Fig. 14.50] . ***Symbegonia beccarii***

67. Blades not dimidiate.

75. Blades narrowly lanceolate, 4 to more than 5 times as long as wide; inflorescence dichotomous at base; staminate tepals 4. West Africa.

Cameroon (1905). [Fig. 14.51] . . . . ***B. capillipes***

Gabon (1921). [Fig. 14.52] . . . . ***B. cultrata***

75. Blades elliptic or ovate-elliptic or obovate, broader.

76. Blades strongly inequilateral; staminate tepals 2.

77. Blades elliptic, broadly acute and apiculate. Indonesia, Celebes. [Fig. 14.53] . . . . ***B. hispidissima***

77. Blades ovate-elliptic with a long, narrowly triangular apex. West Africa: Gabon. [Fig. 14.54] . . . . ***B. aggeloptera***

76. Blades slightly inequilateral.

78. Blades cordate at base.

79. Apex of blade narrowly triangular. Brazil: Rio de Janeiro. [Fig. 14.21] . . ***B. declinata***
79. Apex of blade broadly subacute, apiculate. West Africa: Cameroon. [Fig. 9.17] . . . . ***B. ndongensis***
78. Blades broadly rounded at base; staminate tepals 4. West Africa.
Cameroon (1905). [Fig. 14.12] . . . . ***B. rubro-marginata***
Gabon (1969). [Fig. 14.10] . . . . ***B. lethomasiae***

Subkey 15

1. Inflorescence unisexual; fruit wingless, fusiform; blades entire or subentire. West Africa.
2. Staminate peduncle 2–3 mm long; ovary densely stellate-lepidote. Cameroon. [Fig. 14.12] . . . . ***B. rubro-marginata***
2. Staminate peduncle 20–30 mm long; ovary glabrous. Cameroon. [Fig. 14.13] . . . . ***B. nicolai-hallei***
1. Inflorescence bisexual.
3. Inflorescences with a central axis or none, not basally dichotomous.
4. Blades cuneate at base.
5. Petioles maximally 4 mm long.
6. Blades linear, (~2 mm wide, 15 cm long. Madagascar (Malagasy Republic). [Fig. 15.1] . . . . ***B. bogneri***
6. Blades rhombic or lance-attenuate, 5–25 mm wide.
7. Ovary alate; blades serrate only near apex; tepals free. Brazil: São Paulo, Santa Catarina. [Fig. 15.2] . . . . ***B. itatinensis***
7. Ovary horned; blades serrate throughout; tepals connate. Colombia. [Fig. 15.3] . . . . ***B. irmscheri***
5. Petioles maximally 10–20 mm long.
8. Staminate tepals 2; blades 6–8 times as long as wide, laxly and coarsely dentate. Indonesia: Sarawak . . . . ***B. elatostemma***
8. Staminate tepals 4; blades 4–6 times as long as wide; plant tuberous. Madagascar.
9. Pistillate tepals 5; capsule-wings subequal; blades laxly serrulate . . . . ***B. antaisaka***
9. Pistillate tepals 6; capsule-wings very unequal; blades entire (var. *cuneata*). [Fig. 7.2] . . . . ***B. antongilensis***
4. Blades rounded at base; staminate tepals 4.
10. Petioles maximally 3 mm long; inflorescence racemose; pistillate tepals 4. (*B. scandens* Vell., non Sw.) Brazil: Rio de Janeiro. [Fig. 14.1] . . . . ***B. cerasiphylla***
10. Petioles maximally 10–25 mm long; stem of a single internode. Burma.
11. Leaf single; blade sublobate; stem very short, tuberous at base. [Fig. 13.10] . . . . . ***B. nivea***
11. Leaves numerous, at the top of a long stem; blade irregularly dentate. [Fig. 15.4] . . . . ***B. adenopoda***
3. Inflorescence dichotomous at base.
12. Blades cuneate at base.
13. Blades 6–10 times as long as wide.
14. Stipules villous; blades tomentose beneath. Brazil: São Paulo. [Fig. 15.5] . . ***B. stenophylla***
14. Stipules, blades, and whole plant glabrous.
15. Outer staminate tepals 1.5 mm long. Indonesia: Sarawak . . . . ***B. xiphophylla***
15. Outer staminate tepals 6–8 mm long. Brazil: Rio de Janeiro. [Fig. 15.6] . . . ***B. salicifolia***
13. Blades not more than ~4 times as long as wide.

16. Petioles to 17 cm long; placentas divided. Malaya. [Fig. 13.18] . . . . ***B. collina***
16. Petioles not more than 1 cm long; placentas simple. Brazil.
17. Blades glabrous, 4–6.5 cm long. Rio de Janeiro to Rio Grande do Sul; Argentina. [Fig. 14.3] . . . . ***B. fruticosa***
17. Blades tomentose beneath; 11–13 cm long. State? [Fig. 14.4] . . . . ***B. parilis***
12. Blades rounded at base.
18. Petioles vestite. Brazil.
19. Staminate tepals 2; pistillate tepals 5; internodes very short and thick; blades rounded and apiculate, 8–11 cm long, wholly stellate-tomentose beneath. Bahía. [Fig. 15.7] . . . . ***B. ruhlandiana***
19. Staminate tepals 4; internodes long and slender.
20. Stipules persistent, large; pistillate tepals 5. Bahía. [Fig. 9.12] . . . . ***B. epibaterium***
20. Stipules quickly deciduous; pistillate tepals 6. Santa Catarina. [Fig. 15.8] . . ***B. polyandra***
18. Petioles glabrous.
21. Capsule-wings subequal. Brazil.
22. Blades entire, about twice as long as wide. Rio de Janeiro. [Fig. 9.14] . . . . . . ***B. radicans***
22. Blades serrate, 2.5–3 times as long as wide; stipules persistent.
23. Blades closely and coarsely serrate. Rio de Janeiro. [Fig. 15.9] . . . . ***B. erecta***
23. Blades laxly repand-serrate-dentate. Rio de Janeiro to Rio Grande do Sul, Argentina. [Fig. 14.3] . . . . ***B. fruticosa***
21. Capsule-wings very unequal.
24. Internode single with a whorl of leaves at its apex; blades attenuate. Burma. [Fig. 15.4] . . . . ***B. adenopoda***
24. Internodes several; blades broadly subacute or rounded. Native of Brazil but worldwide in tropics and subtropics. [Fig. 12.25] . . . . ****B. cucullata***

Subkey 16

1. Inflorescence dichotomous at base.
2. Petioles persistently vestite.
3. Blades elliptic, about twice as long as wide; staminate tepals 2.
4. Petioles 5 mm long. New Guinea. [Fig. 16.1] . . . . ?***B. djamuensis***
4. Petioles 10–15 mm long. Colombia. [Fig. 16.2] . . . . ***B. dugandiana***
3. Blades 3–4 times as long as wide, or if rarely less than the staminate tepals 4.
5. Staminate tepals 2; pistillate tepals 4, very unequal; inflorescence twice dichotomous, very lax. Colombia. [Fig. 16.3] . . . . ***B. xylopoda***
5. Staminate tepals 4; pistillate tepals 5 or 6; inflorescence 3–8 times dichotomous. Brazil.
6. Blades strongly inequilateral, oblanceolate; lateral nerves 7–8. São Paulo. [Fig. 16.4] . . . . ***B. spinibarbis***
6. Blades weakly inequilateral, lance-oblong; lateral nerves 10–20.
7. Pistillate tepals 6; peduncle about as long as the inflorescence. Santa Catarina. [Fig. 15.8] . . . . ***B. polyandra***
7. Pistillate tepals 5. Rio de Janeiro.
8. Peduncles much shorter than the inflorescence. [Fig. 16.5] . . . . ***B. dentatiloba***
8. Peduncles about twice as long as the inflorescence. [Fig. 16.6] . . . . ?***B. oxyphylla***
2. Petioles glabrous or glabrescent.

9. Petioles 5–17 cm long.
10. Blades about twice as long as wide; petioles 5–10 cm long. India. [Fig. 16.7] . . . ***B. hatacoa***
10. Blades more than 3 times as long as wide; petioles to 17 cm long. Malaya. [Fig. 13.18] . . . . ***B. collina***
9. Petioles less than 4 cm long.
11. Base of blade cuneate.
12. Blades obovate, less than twice as long as wide. Brazil: Bahía. [Fig. 14.22] . . . ***B. smilacina***
12. Blades 2–6 times as long as wide.
13. Margin duplicate-serrate or denticulate; blades 2–3 times as long as wide.
14. Blades 5–8 cm wide; pistillate tepals 5. Ecuador, Peru. [Fig. 16.8] . . . . ***B. maynensis***
14. Blades less than 3 cm wide; pistillate tepals 6. Brazil: Santa Catarina. [Fig. 15.8] . . . . . . ***B. polyandra***
13. Margin subentire or laxly and obscurely denticulate.
15. Fruits alate. Brazil: São Paulo. [Fig. 16.9] . . . . ***B. inculta***
15. Fruits wingless, fusiform, indehiscent. Tropical West Africa.
16. Inflorescence bisexual; stem slightly flexuous; blade 5–6 times as long as wide. Guinea to Congo. [Fig. 14.25] . . . . ***B. polygonoides***
16. Inflorescence unisexual; stem geniculate; blade 3–4 times as long as wide. Gabon. [Fig. 14.13] . . . . ***B. nicolai-hallei***
11. Base of blade rounded.
17. Staminate tepals 2.
18. Blades more than 3 times as long as wide, coarsely serrate or duplicate-serrate. Philippines.
19. Blades brown-setose on the nerves beneath. [Fig. 16.10] . . . . ***B. cumingiana***
19. Blades glabrous. [Fig. 14.32] . . . . ***B. malindangensis***
18. Blades 2–3 times as long as wide, serration inconspicuous. South America.
20. Blades 3.5–8 cm wide. Colombia.
21. Inflorescence very lax; 2–3 times dichotomous; staminate tepals narrowly ovate, 16 mm long. [Fig. 16.11] . . . . ***B. extensa***
21. Inflorescence dense, 4–6 times dichotomous; staminate tepals orbicular, 4 mm long. [Fig. 16.12] . . . . ***B. alnifolia***
20. Blades 3–4 cm wide; inflorescence 4–6 times dichotomous. Peru.
22. Upper bracts obovate, 3 mm long; style bifid, the arms simple. [Fig. 16.13] . . . . ***B. rubiginosipes***
22. Upper bracts oblong or linear-oblong, 2 mm long; style bifid, the arms branched. [Fig. 14.29] . . . . ***B. pilosella***
17. Staminate tepals 4.
23. Blades broadly acute or rounded and apiculate; inflorescence mostly once dichotomous.
24. Blades entire; petioles 1–3.5 cm long; ovary wingless, 4-celled. Tropical Africa. [Fig. 16.14] . . . . ***B. loranthoides***
24. Blades crenate-serrate; ovary alate, 3-celled.
25. Blades rounded; stipules persistent; outer staminate tepals scarcely darker than the inner. Native of southern Brazil, Paraguay, and northern Argentina, widely naturalized in the tropics and subtropics of the world. [Fig. 12.25] . . . . ****B. cucullata***
25. Blades broadly acute; stipules deciduous, outer staminate tepals much darker than the inner. Argentina. [Fig. 16.15] . . . . ***B. descoleana***
23. Blades acuminate; inflorescence 1–4 times dichotomous.

26. Stipules quickly deciduous; petioles 1–2 cm long; inflorescence 3–4 times dichotomous.
  27. Blades twice as long as wide; pistillate tepals 3. Colombia. [Fig. 16.16] . ***B. cymbalifera***
  27. Blades 4 times as long as wide; pistillate tepals 5. Brazil: Minas Gerais. [Fig. 16.17] .... ***B. heringeri***
26. Stipules persistent, broad.
  28. Petioles 2–3 mm long; bracts large, persistent; tepals acute, 20–28 mm long, the pistillate 3. Colombia. [Fig. 16.18] .... ***B. cuatrecasasiana***
  28. Petioles 5–20 mm long.
    29. Stems geniculate, 5–10 cm long; stipules lanceolate-filiform. Tropical West Africa: Gabon. [Fig. 14.13] .... ***B. nicolai-hallei***
    29. Stem flexuous, to 80 cm long; stipules broader. Brazil: Rio de Janeiro.
      30. Inflorescence once or twice dichotomous, few-flowered; stipules attenuate. [Fig. 16.19] .... ***B. bidentata***
      30. Inflorescence 4–5 times dichotomous, many-flowered; stipules acute. [Fig. 16.20] .... ***B. bonitoensis***

1. Inflorescence with a central axis or none.
  31. Petioles persistently vestite.
    32. Petioles 25–75 mm long.
      33. Staminate tepals 2; stipules oblong; ovary unequally trialate. Indonesia: Sarawak. [Fig. 16.21] .... ***B. congesta***
      33. Staminate tepals 4.
        34. Ovary trialate, 3-celled; stipules oblong, acute. Ecuador. [Fig. 16.22] .... ***B. harlingii***
        34. Ovary wingless, 4-celled; stipules very narrowly triangular. Tropical West Africa: Fernando Po. [Fig. 14.20] .... ****B. mannii***
    32. Petioles 2–20 mm long.
      35. Blades 3–5 times as long as wide.
        36. Fruit subequally alate; blades coarsely double-dentate. Philippines. [Fig. 16.10] .... ***B. cumingiana***
        36. Fruit wingless, linear, 5 cm long; blades sinuate-dentate. Tropical West Africa: Fernando Po. [Fig. 16.23] .... ***B. furfuracea***
      35. Blades less than 3 times as long as wide.
        37. Inflorescences unisexual, the pistillate one-flowered or fasciculate.
          38. Staminate inflorescences capituliform, few-flowered; petioles 4–20 mm long. Tropical West Africa: Cameroon, Congo. [Fig. 16.24] .... ***B. rhopalocarpa***
          38. Staminate inflorescences racemose; petioles 2 mm long. Philippines. [Fig. 16.25] .... ***B. brevipes***
        37. Inflorescences uniform.
          39. Flowers solitary or fascicled.
            40. Blades broadly acute or rounded, apiculate.
              41. Fruit equally 3-winged, 3-celled. Philippines. [Fig. 16.26] .... ***B. elatostematoides***
              41. Fruit wingless, 6-celled. Tropical West Africa: Cameroon. [Fig. 16.24] .... ***B. rhopalocarpa***
            40. Blades acuminate.
              42. Margin coarsely double-dentate; blades rhombic, ~4 cm long. Philippines. [Fig. 14.36] .... ***B. parvilimba***
              42. Margin crenate-undulate or subentire.

43. Staminate tepals 2; blades lanceolate. Sumatra. [Fig. 16.27] . . . . **B. flexula**

43. Staminate tepals 4; blades elliptic. Tropical West Africa: São Tomé. [Fig. 16.28] . . . . **B. molleri**

39. Flowers on a distinct central axis, racemose or paniculate. Indonesia.

44. Blades broadly acute, apiculate, subentire; stipules suborbicular or broadly obovate, broadly rounded. Sumatra. [Fig. 14.23] . . . . **B. aberrans**

44. Blades acuminate; stipules narrower, acute or acuminate.

45. Blades coarsely double-dentate toward apex, subrhombic. Philippines. [Fig. 16.29] . . . . **B. palawanensis**

45. Blades obscurely duplicate-dentate-serrate toward apex. New Guinea. [Fig. 16.30] . . . . **B. calliantha**

31. Petioles glabrous or glabrescent.

46. Inflorescence racemose or paniculate with a distinct central axis; margin irregular.

47. Staminate tepals 4.

48. Petioles maximally 4–6 mm long; capsule-wings equal or subequal.

49. Plant herbaceous, tuberous; bracts minute. Madagascar. [Fig. 16.31] . . . . **B. tanala**

49. Plant suffruticose; bracts ovate, to 16 mm long. Brazil: Rio de Janeiro [Fig. 16.32] . . . . **B. edmundoi**

48. Petioles maximally 18–50 mm long.

50. Blades elliptic, broadly rounded and apiculate; ovary wingless, 6-celled. Tropical West Africa: Cameroon, Congo. [Fig. 16.24] . . . . **B. rhopalocarpa**

50. Blades acuminate or triangular-acute.

51. Ovary wingless. Tropical West Africa: São Tomé. [Fig. 12.6] . . . . . . **B. macambrarensis**

51. Ovary unequally trialate. India: Nepal. [Fig. 12.7] . . . . **B. minicarpa**

47. Staminate tepals 2.

52. Margin denticulate. Colombia, Ecuador, Peru. [Fig. 16.33] . . . . **B. rossmanniae**

52. Margin at least in part coarsely dentate. Philippines.

53. Base of blade broadly rounded; capsule-wings subequal. [Fig. 16.10] . . . . **B. cumingiana**

53. Base of blade essentially cuneate.

54. Capsule-wings unequal; blades 5–8 cm long, 2 to more than 3 times as long as wide. [Fig. 16.34] . . . . **B. littleri**

54. Capsule-wings equal or subequal.

55. Blades less than 3 times as long as wide; capsules ~15 mm long. [Fig. 16.29] . . . . **B. palawanensis**

55. Blades 3–5 times as long as wide.

56. Capsules nearly 20 mm long . . . . **B. longistipula**

56. Capsules nearly 8 mm long. [Fig. 6.17] . . . . **B. lancifolia**

46. Inflorescence one-flowered or with a fascicle of flowers but with no axis.

57. Margins entire. Tropical West Africa.

58. Stem slender.

59. Blades broadly rounded. Cameroon. [Fig. 16.35] . . . . **B. sanjeënsis**

59. Blades acuminate. São Tomé. [Fig. 16.28] . . . . **B. molleri**

58. Stem stout; blades broadly subacute, apiculate; plants dioecious.

Upper Guinea, Princes Island, Nigeria (1871). [Fig. 16.36] . . . . **B. loranthoides**

Cameroon (1904). [Fig. 14.12] . . . . **B. rubro-marginata**

57. Margins irregular.

60. Blades rounded at base.
  61. Stems geniculate, simple; blades laxly denticulate toward apex. Tropical West Africa: Gabon. [Fig. 14.13] .... ***B. nicolai-hallei***
  61. Stems straight.
    62. Blades sharply and densely serrate almost throughout; stem simple. Venezuela. [Fig. 16.37] .... ***B. kunthiana***
    62. Blades undulate-dentate on the upper half, entire below; stem branched. Philippines. [Fig. 16.38] .... ***B. edanoi***
60. Blades cuneate at base.
  63. Blades twice as long as wide, subrhombic, 4 cm long. Philippines. [Fig. 14.36] .... ***B. parvilimba***
  63. Blades 3–6 times as long as wide, much more than 4 cm long.
    64. Margin coarsely serrate. Madagascar. [Fig. 16.31] .... ***B. tanala***
    64. Margin undulate.
      65. Blades glabrous, 3–4 times as long as wide. Brazil: Rio de Janeiro. [Fig. 16.32] .... ***B. edmundoi***
      65. Blades stellate-pubescent when young, 5–6 times as long as wide. Tropical West Africa: Guinea to Congo. [Fig. 14.25] .... ***B. polygonoides***

Subkey 17

1. Petioles densely and persistently vestite.
  2. Blades broadly subacute or rounded and apiculate at apex.
    3. Staminate tepals 4; ovary turbinate, equally 3-horned.
      4. Inflorescence dense, few-flowered. Colombia. [Fig. 17.1] .... ***B. chlorolepis***
      4. Inflorescence lax, 3 times dichotomous. Peru. Fig. [17.2] .... ***B. raimondii***
    3. Staminate tepals 2; ovary ellipsoid, unequally 3-alate; inflorescence lax.
      5. Stipules firm, conspicuous. Venezuela, Trinidad, Guyana. [Fig. 17.3] .... ***B. ulmifolia***
      5. Stipules thin, inconspicuous.
        6. Inflorescence 2–3 times dichotomous. Peru. [Fig. 17.4] .... ***B. gesnerioides***
        6. Inflorescence 4 times dichotomous. Brazil: Espírito Santo. [Fig. 17.5] .... ***B. jairii***
  2. Blades narrowly acute or acuminate.
    7. Longer basal lobe rounded and projecting below its contact with the petiole.
      8. Longer basal lobe diverging from the petiole, not auricled.
        9. Staminate tepals free; inflorescence many times dichotomous.
          10. Blades ~4 times as long as wide; placentas simple. Brazil: Rio de Janeiro? [Fig. 16.6] .... ?***B. oxyphylla***
          10. Blades about twice as long as wide; placentas divided. Bolivia. [Fig. 17.6] .... ***B. varistyla***
        9. Staminate and pistillate tepals connate into cup-shaped perianths; inflorescence once dichotomous with numerous, distichous bracts on the branches. Colombia. [Fig. 17.7] . ?***B. oliveri***
      8. Longer basal lobe auricled, projecting laterally over the top or all of the petiole.
        11. Staminate tepals 2. Indonesia.
          12. Tepals connate; blades very coarsely duplicate-serrate; basal lobe covering the whole petiole. New Guinea. [Fig. 17.8] .... ***Symbegonia arfakensis***
          12. Tepals free. Borneo.

13. Staminate pedicels jointed with the lower part persistent. [Fig. 14.45] .... ***B. articulata***

13. Staminate pedicels jointed at base only, falling with the flowers.

14. Blades oblanceolate, about 4 times as long as wide; leaves sometimes opposite. Borneo. [Fig. 17.9] .... ***B. sympodialis***

14. Blades oblong-obovate, about twice as long as wide; leaves always alternate. Phillipines. [Fig. S18] .... ***B. ciliifera***

11. Staminate tepals 4.

15. Peduncle much exceeding the leaves. West Indies: Puerto Rico. [Fig. 17.10] ***B. decandra***

15. Peduncle about equaling to much shorter than the leaves.

16. Blades densely serrate; basal lobe to 5 mm long. Colombia. [Fig. 17.11].... ***B. barrigae***

16. Blades remotely denticulate; basal lobe minute. Brazil: São Paulo. [Fig. 16.4] .... ***B. spinibarbis***

7. Larger basal lobe square-cornered or acute, not projecting below its contact with the petiole.

17. Inflorescence once dichtomous. Colombia.

18. Tepals free. [Fig. 17.12] .... ***B. diversistipulata***

18. Tepals connate into a cup-shaped perianth. [Fig. 17.7] .... ?***B. oliveri***

17. Inflorescence 3–5 times dichotomous.

19. Blades 4 times as long as wide; placentas simple. Brazil: Rio de Janeiro? [Fig. 16.6] .... ?***B. oxyphylla***

19. Blades 2–2.5 times as long as wide.

20. Margin coarsely double-dentate. Central America: Costa Rica. [Fig. 17.13] ... ***B. cooperi***

20. Margin undulate and denticulate. New Guinea. [Fig. 17.14].......... ***B. diffusiflora***

1. Petioles glabrous or glabrescent.

21. Blades broadly subacute or rounded, sometimes apiculate.

22. Margin subentire or slightly sinuate; inflorescence 3–4 times dichotomous. Brazil.

23. Stipules persistent; blades straight or nearly so. Espírito Santo. [Fig. 17.15] . ***B. inconspicua***

23. Stipules deciduous; blades deflexed-falcate. Rio de Janeiro. [Fig. 17.16]..... ***B. arborescens***

22. Margin distinctly cut.

24. Stipules and bracts deciduous; staminate tepals 2 or 4. Colombia. [Fig. 14.47] .. ***B. holtonis***

24. Stipules and bracts persistent; staminate tepals 4.

25. Placentas simple.

26. Margins crenate with low, rounded, dense projections; blades to 9 cm long. Brazil: Ceará. [Fig. 17.17] .... ***B. pilderifolia***

26. Margins serrate with sharp, ascending, lax projections; blades to 5 cm long; petioles 2–3(8) mm long.

27. Inflorescence 2–3 times dichotomous. Venezuela, Colombia. [Fig. 17.18] ***B. fuchsioides***

27. Inflorescence never more than once dichotomous. Colombia, Venezuela, Ecuador. [Fig. 17.19] .... ***B. foliosa***

25. Placentas bilamellate; staminate tepals subequal. Brazil.

28. Pistillate tepals subequal, all ovate and apiculate. Ceará. [Fig. 17.20] ...... ***B. heloisana***

28. Pistillate tepals very unequal.

29. Inflorescence 4 times dichotomous; branches and peduncles stout. Ceará. [Fig. 17.21] .... ***B. saxicola***

29. Inflorescence twice dichotomous; branches and peduncles very slender. Pernambuco. [Fig. 17.22] .... ***B. egleri***

21. Blades narrowly acute or acuminate.
30. Petioles 10–45 mm long.
31. Margin entire; petioles 25–45 mm long. Tropical Africa. [Fig. 16.14] ..... ***B. loranthoides***
31. Margin variously cut.
32. Blades broad, much less than twice as long as wide. Central America: Panama. [Fig. 17.23] ..... ***B. opuliflora***
32. Blades 2–3 times as long as broad.
33. Placentas simple. Brazil.
34. Blades subequilateral; stipu[illegible]uous; inflorescence 3 times dichotomous. Minas Gerais. [Fig. 16.17] ..... ***B. heringeri***
34. Blades strongly inequilateral; stipules persistent; inflorescence twice dichotomous. Ceará. [Fig. 17.24] ..... ***B. alemanii***
33. Placentas bilamellate.
35. Longer basal lobe large, its auricle completely covering the petiole; stipules ovate, acute, to 4 cm long. Brazil: Santa Catarina. [Fig. 17.25] ..... ***B. konder-reisiana***
35. Longer basal lobe minute.
36. Stipules persistent; inflorescence twice dichotomous. Central America: Costa Rica, Panama. [Fig. 17.26] ..... ***B. seemanniana***
36. Stipules deciduous; inflorescence 4 times dichotomous. Colombia. Venezuela. [Fig. 16.12] ..... ***B. alnifolia***
30. Petioles 1–10(–15) mm long.
37. Staminate tepals 2.
38. Blades ~4 times as long as wide.
39. Base cuneate. Indonesia: Sumatra. [Fig. 16.27] ..... ***B. flexula***
39. Base rounded. Brazil: Rio de Janeiro. [Fig. 16.5] ..... ?***B. dentatiloba***
38. Blades 2–3 times as long as wide.
40. Margin finely cut to subentire.
41. Inflorescence 5–6 times dichotomous; plants wholly glabrous.
42. Largest capsule-wing subtriangular. Peru [Fig. 16.13] ..... ***B. rubiginosipes***
42. Largest capsule-wing obliquely ovate or sublinguiform. Colombia. [Fig. 17.27] ..... ?***B. praerupta***
41. Inflorescence once or twice dichotomous.
43. Placentas bilamellate; inflorescence twice dichotomous. Central America. [Fig. 17.26] ..... ***B. seemanniana***
43. Placentas simple; inflorescence once dichotomous. Brazil: Rio de Janeiro. [Fig. 17.28] ..... ?***B. densifolia***
40. Margin coarsely duplicate-dentate or duplicate-serrate.
44. Petioles 6–12 mm long; margin with sharp projections. Peru. [Fig. 17.29] ..... ***B. prionophylla***
44. Petioles 2–4 mm long; margins sublobate and denticulate. Philippines. [Fig. 16.10] ..... ***B. cumingiana***
37. Staminate tepals 4.
45. Inflorescence once or twice dichotomous.
46. Capsule-wings equal or subequal; placentas simple. Brazil.
47. Stipules narrowly ovate, attenuate, deciduous. Bahía, Rio de Janeiro. [Fig. 16.19] ..... ***B. bidentata***

47. Stipules ovate-oblong or oblong, persistent. Rio de Janeiro. [Fig. 17.28] . ?***B. densifolia***
46. Capsule-wings distinctly unequal.
48. Stipules deciduous; placentas bilamellate. Burma. [Fig. 17.30] .... ***B. procridifolia***
48. Stipules persistent.
49. Blades subentire, 10–15 cm long. Cultivated. Brazil. [Fig. 17.31] ..... ****B. forgetiana***
49. Blades laxly serrate, to 4 cm long. Colombia, Venezuela, Ecuador. [Fig. 17.19] .... ***B. foliosa***
45. Inflorescence 3–5 times dichotomous.
50. Placentas simple. Brazil.
51. Blades subentire, less than 3 times as long as wide; inflorescence 3 times dichotomous. Espírito Santo. [Fig. 17.15] .... ***B. inconspicua***
51. Blades undulate-dentate, more than 3 times as long as wide; inflorescence 5 times dichotomous. Rio de Janeiro. [Fig. 16.5] .... ?***B. dentatiloba***
50. Placentas bilamellate.
52. Capsule-wings equal or subequal; blade 6 times as long as wide. Brazil: Rio de Janeiro. [Fig. 15.6] .... ***B. salicifolia***
52. Capsule-wings unequal; petioles to 3 mm long.
53. Plant erect, shrubby; stipules persistent. Colombia. [Fig. 17.32] .... ***B. multiflora***
53. Plant scandent; stipules deciduous.
54. Blades less than 3 times as long as wide, nerves indistinct; axes of inflorescent stout. Colombia. [Fig. 17.27] .... ?***B. praerupta***
54. Blades more than 3 times as long as wide, nerves distinct beneath; axes of inflorescence very slender. Costa Rica. [Fig. 17.33] .... ***B. lignescens***

Subkey 18

1. Petioles glabrous or glabrescent.
2. Blades broadly subacute or rounded and often apiculate.
3. Indument stellate; plant scandent. Tropical Wet Africa: Cameroon. [Fig. 18.1] . ***B. ebolowensis***
3. Indument not stellate; plant erect, often shrubby.
4. Capsule ellipsoid or subglobose, alate.
5. Inflorescences 1-flowered, axillary; blades maximally 4 cm long.
6. Branches smooth. Colombia, Venezuela, Ecuador. [Fig. 17.19] .... ***B. foliosa***
6. Branches densely papillose. Colombia, Venezuela. [Fig. 18.2] .... ***B. microphylla***
5. Inflorescences several- to many-flowered.
7. Central axis short; flowers few. Brazil: Paraíba. [Fig. 18.3] .... ***B. burle-marxii***
7. Central axis elongate; flowers many, the pistillate basal; staminate tepals 2. Philippines. [Fig. 18.4] .... ***B. leptantha***
4. Capsule turbinate, equally 3-horned.
8. Capsule-horns sharply ascending; staminate tepals ~50 mm long. Venezuela. [Fig. 18.5] ... . ***B. formosissima***
8. Capsule-horns spreading or slightly ascending; staminate tepals 4–30 mm long.
9. Stem wholly decumbent; pistillate tepals 8–20 mm long. Venezuela. [Fig. 14.26] .... ***B. montana***
9. Stem wholly or mostly erect; pistillate tepals 3–14 mm long.
10. Blades 1.8–3.4 cm long, mostly less than twice as long as wide; capsule-horns slender,

slightly ascending. Colombia. [Fig. 18.6] . . . . ***B. diffusa***

10. Blades to 8 cm long, mostly much more than twice as long as wide; capsule-horns stout, spreading. Costa Rica to Venezuela and Peru. [Fig. 18.7] . . . . ***B. urticae***

2. Blades sharply acute or acuminate.

11. Staminate tepals 4.

12. Capsule 3-winged.

13. Inflorescences paniculate with the pistillate flowers basal. Philippines. [Fig. 18.8] . . . . ***B. oligantha***

13. Inflorescences 1-flowered. Venezuela, Colombia, Ecuador. [Fig. 17.19] . . . . ***B. foliosa***

12. Capsule turbinate, equally 3-horned. America.

14. Bracts large, imbricate, persistent. Colombia. [Fig. 18.9] . . . . ***B. killipiana***

14. Bracts small, not imbricate.

15. Capsule-horns sharply ascending; staminate tepals ~50 mm long. Venezuela. [Fig. 18.5] . . . . ***B. formosissima***

15. Capsule-horns spreading; staminate tepals 3–8 mm long. Costa Rica to Venezuela and Peru. [Fig. 18.7] . . . . ***B. urticae***

11. Staminate tepals 2; capsules alate (so far as known)

16. Blades coarsely dentate or double-dentate at least on the upper half. Philippines.

17. Blades subrhombic, cuneate at base; stipules small, inconspicuous.

18. Capsule-wings triangular; blades lobate-dentate. Philippines. [Fig. 16.25] . . . . ***B. brevipes***

18. Capsule-wings subcrescentiform; blades remotely serrate. New Guinea. [Fig. S19] . . . . ***B. serraticauda***

17. Blades ovate or elliptic, one side of base broadly rounded; stipules large, conspicuous. Philippines. [Fig. 16.10] . . . . ***B. cumingiana***

16. Blades entire or obscurely serrulate or denticulate.

19. Petioles 3–15 mm long.

20. Capsule-wings equal. Sarawak. [Fig. 18.10] . . . . ***B. consanguinea***

20. Capsule-wings unequal. New Guinea. [Fig. 18.11] . . . . ***B. glabricaulis***

19. Petioles 20–30 mm long. New Guinea.

21. Longer basal lobe minute. [Fig. 18.12] . . . . ***B. strictinervis***

21. Longer basal lobe large, extending laterally over the petiole. [Fig. 18.13] . . . . ***B. naumoniensis***

1. Petioles densely and persistently vestite.

22. Blades broadly subacute or rounded at apex, someetimes apiculate; staminate tepals 2 (unknown in *B. leptantha*).

23. Blades once to twice as long as wide.

24. Blades elliptic: petioles 30–70 mm long. Borneo. [Fig. 18.14] . . . . ***B. densiretis***

24. Blades obovate.

25. Petiole 10–15 mm long. New Guinea. [Fig. 18.15] . . . . ***B. gilgiana***

25. Petioles 3–8 mm long.

26. Blades cuneate at base. Philippines. [Fig. 18.4] . . . . ***B. leptantha***

26. Blades rounded at base. New Guinea. . . . . ***B. monantha***

23. Blades 2.5–4 times as long as wide. Borneo.

27. Staminate pedicels jointed with the basal section persistent; margin duplicate-denticulate; longer basal lobe extending laterally above the petiole. [Fig. 14.45] . . . . ***B. articulata***

27. Staminate pedicels continuous; margin obtusely and irregularly dentate.

28. Blades closely serrate-dentate, the basal lobe not extending over the petiole. Borneo. [Fig. 14.49] . . . . ***B. pleioclada***

28. Blades undulate-denticulate, the basal lobe extending over the petiole. West Africa: Cameroon. [Fig. S20] . . . . ***B. gracilicaulis***

22. Blade sharply acute or acuminate.

29. Petioles maximally 10–80 mm long.

30. Staminate tepals 2.

31. Larger basal lobe extended laterally, covering the top of the petiole; petiole 30–80 mm long. New Guinea. [Fig. 18.16] . . . . ***B. hirsuticaulis***

31. Larger basal lobe not auriculate, not covering the top of the petiole. Philippines.

32. Petiole maximally 10 mm long. [Fig. 18.17] . . . . ***B. sorsogonensis***

32. Petiole 15–30 mm long. [Fig. 18.18] . . . . ***B. samarensis***

30. Staminate tepals 4. South America.

33. Inflorescence paniculate, many-flowered; blades about 4 times as long as wide. Venezuela to Peru. [Fig. 18.19] . . . . ***B. buddleiifolia***

33. Inflorescence (pistillate) one-flowered or few-flowered raceme.

34. Blades slightly more than twice as long as wide; outer staminate tepals united into a 4-lobed cup. Colombia. [Fig. 18.20] . . . . ***B. libera***

34. Blades about 5 times as long as wide. staminate tepals free. Brazil. [Fig. 18.21] . . . . ***B. rufosericea***

29. Petioles maximally not more than 8 mm long.

35. Blades ~8 times as long as wide, linear-lanceolate. (Inflorescence unknown.) Borneo. [Fig. 18.22] . . . . ?***B. angustilimba***

35. Blades much wider.

36. staminate tepals 4.

37. Inflorescence (staminate) paniculate, many-flowered. New Guinea. [Fig. 18.23] . . . . ***B. montis-bismarckii***

37. Inflorescence unbranched, one–few-flowered. South America.

38. Ovary subglobose unequally 3-winged; petioles very short, covered by the persistent stipules; blades to 14 mm long. Venezuela. [Fig. 18.24] . . . . ***B. confinis***

38. Ovary turbinate, equally 3-horned.

39. Staminate tepals united into a 4-lobed cup. Colombia. [Fig. 18.25] . . . . . . ***B. kalbreyeri***

39. Staminate tepals free.

40. Pistillate tepals 5, subequal.

41. Staminate tepals retuse; filaments free. Ecuador. [Fig. 18.26] . . . . ***B. valvata***

41. Staminate tepals broadly rounded; filaments connate in a long column. Colombia. [Fig. 18.27] . . . . ***B. antioquiensis***

40. Pistillate tepals 6, the inner 3 very unlike the outer.

42. Outer staminate tepals thick, hemispheric, 6 mm long. Colombia. [Fig. 18.28] . . . . ***B. ursina***

42. Outer staminate tepals thin: triangular ovate, 11–16 mm long. Ecuador, Peru. [Fig. 18.29] . . . . ***B. tetrandra***

36. Staminate tepals 2.

43. Pistillate tepals united in a cup, the staminate sometimes also; ovary equally 3-winged. New Guinea . . . . ***Symbegonia***

44. Blades subsessile.

45. Stem fulvous pubescent becoming glabrous; blade-base oblique. [Fig. 18.30] . . . . ***S. sanguinea***

45. Stem fulvous-villous with hairs 3–5 mm long; blade-base subauriculate. [Fig. 18.31] . . . . . . ***S. strigosa***

44. Blades distinctly petiolate for 2–5 mm.

46. Longer basal lobe diverging from the petiole. [Fig. 14.50] . . . . ***S. beccarii***

46. Longer basal lobe projecting laterally over the top of the petiole.

47. Blades densely pubescent above. [Fig. 18.32] . . . . ***S. fulvo-villosa***

47. Blades nearly glabrous above. [Fig. 6.15] . . . . ***S. mooreana***

43. Pistillate and staminate tepals both free.

48. Longer basal lobe auriculate, projecting laterally over the top of the petiole.

49. Inflorescences sessile, few-flowered, dense. Tropical West Africa: Fernando Po. [Fig. 3.8] . . . . ***?B. gilgii***

49. Inflorescences pedunculate, one–many-flowered, lax.

50. Blades lanceolate or ovate.

51. Blades 3–4(–5–6) times as long as wide.

52. Inflorescence racemose, few-flowered. New Guinea. [Fig. 18.33] . . . . ***B. malmquistiana***

52. Inflorescence paniculate, many-flowered. Borneo. [Fig. S21] . . . . . ***B. oblongifolia***

51. Blades about twice as long as wide. New Guinea. [Fig. 18.34] . . . . ***B. rhodantha***

50. Blades obovate-cuneate.

53. Blades about 4 times as long as wide. Borneo [Fig. 17.9] . . . . ***B. sympodialis***

53. Blades about twice as long as wide.

54. Blades partially setose; lower leaves opposite. Borneo. [Fig. 14.44] . . . ***B. longiseta***

54. Blades glabrous; leaves alternate. New Guinea [Fig. 12.2] . . ***B. pentaphragmifolia***

48. Longer basal lobe not auricled nor projecting over the top of the petiole.

55. Blades subsessile, elliptic-oblong, 4–9 mm wide. Tropical West Africa: Gabon. [6.18] . . . . ***B. minutifolia***

55. Blades distinctly petiolate for 2–8 mm, 5–65 mm wide. New Guinea.

56. Stipules hirsute; blades vestite above.

57. Blades lance-oblong, 25 mm wide. [Fig. 18.35] . . . . ***B. randiana***

57. Blades obovate, 30–40 mm wide.

58. Leaves partly opposite. New Guinea. [Fig. 18.36] . . . . ***B. moszkowskii***

58. Leaves all opposite. Philippines. [Fig. S18] . . . . ***B. ciliifera***

56. Stipules glabrous; blades glabrous above. New Guinea.

59. Blades completely glabrous, 50–65 mm wide. [Fig. 16.1] . . . . ***B. djamuensis***

59. Blades appressed-hirtellous on the mid-nerve beneath, 5–20 mm wide. [Fig. 18.37] . . . . ***B. suffrutescens***

Subkey 19

1. Blades rounded or broadly subacute and apiculate at apex.

2. Petioles 40–100 m long; staminate tepals 4. Siam. . . . . ***B. notata***

2. Petioles not more than 15 mm long.

3. Plants scandent or pendent.

4. Blades concolorous; indument stellate; fruit wingless. Tropical West Africa: Cameroon. [Fig. 19.1] . . . . ***B. sessilanthera***

4. Blades longitudinally white-striped above; indument simple, filamentous; fruit subequally 3-winged. Brazil. [Fig. 19.2] . . . . ***B. thelmae***
3. Plants erect, more or less suffruticose.
5. Blades subsessile, deeply double-dentate. New Guinea. [Fig. 19.3] . . . . ***B. multidentata***
5. Blades distinctly petiolate.
6. Staminate tepals 2. Brazil: Bahía. [Fig. 19.4] . . . . ***B. dasycarpa***
6. Staminate tepals 4.
7. Capsule-wings very unequal; placentas bilamellate. Cuba. [Fig. 12.16] . . . . ***B. cubensis***
7. Capsule-wings subequal, narrow; placentas simple. Brazil: State? [Fig. 19.5] . . ***B. parvifolia***
1. Blades sharply acute or acuminate.
8. Larger basal lobe with a sinus between it and the petiole, not auricled.
9. Stipules large, ample, persistent; blades coarsely duplicate-dentate or serrate.
10. Petioles 10–22 mm long; stem geniculate. Bolivia.
11. Stipules suborbicular [Fig. 19.6] . . . . ?***B. bangii***
11. Stipules distinctly longer than wide; styles twice bifurcate. [Fig. 17.6] . . . . ***B. varistyla***
10. Petioles 2–9 mm long; stem nearly straight.
12. Blades oblong-lanceolate or linear-lanceolate. 4 times as long as wide. Brazil. [Fig. 19.7] . . . . ***B. insularis***
12. Blades ovate or subelliptic, about twice as long as wide. Indonesia.
13. Staminate tepals 4; blades ovate. Sumatra. . . . . ?***B. bracteata***
13. Staminate tepals 2; blades subelliptic. Philippines. [Fig. 19.8] . . . . ***B. jagorii***
9. Stipules narrow, mostly deciduous.
14. Staminate tepals 2; cymes fascicled. Sumatra. . . . . ***B. fasciculata***
14. Staminate tepals 4; inflorescence not fasciculate.
15. Blades 2–3 times as long as wide or slightly narrower.
16. Margins duplicate-dentate or serrate.
17. Peduncles much shorter than the leaves. Philippines. [Fig. 19.9] . . . . ***B. halconensis***
17. Peduncles much exceeding the leaves. Puerto Rico [Fig. 17.10] . . . . ***B. decandra***
16. Margins regularly serrate or obscurely dentate.
18. Blades to 30 cm long; inflorescence 5–6 times dichotomous; placentas simple. Brazil: Rio de Janeiro. [Fig. 19.10] . . . . ****B. hookerana***
18. Blades not more than 10 cm long.
19. Inflorescence 2–3 times dichotomous; blades glabrous. Brazil: São Paulo. [Fig. 19.11] . . . . ***B. peruibensis***
19. Inflorescence 5–6 times dichotomous; blades hirsute beneath. Colombia. [Fig. 16.2] . . . . ***B. dugandiana***
15. Blades 4–6 times as long as broad.
20. Capsule-wings very unequal. India. . . . . ?***B. griffithiana***
20. Capsule-wings subequal. Brazil.
21. Blades remotely denticulate. Rio de Janeiro? [Fig. 16.6] . . . . ?***B. oxyphylla***
21. Blades closely denticulate. Santa Catarina. [Fig. 19.12] . . . . ***B. garuvae***
8. Larger basal lobe produced laterally and covering at least the apex of the petiole, auriculate.
22. Inflorescence fasciculate; staminate tepals 2. Sumatra. . . . . ***B. fasciculata***
22. Inflorescence dichotomous at base.
23. Petioles maximally 20–90 mm long.
24. Margins merely undulate, otherwise entire; staminate tepals 2, vestite. Brazil: Santa Catarina. [Fig. 19.13] . . . . ***B. rupium***

24. Margins distinctly cut.
25. Peduncle much exceeding the leaves. Puerto Rico. [Fig. 17.10] .... ***B. decandra***
25. Peduncle about equaling the leaves to much shorter.
26. Inflorescence many-flowered, 5 times dichotomous; peduncles 10–11 cm long. Brazil: Santa Catarina. [Fig. 19.14] .... ***B. lineolata***
26. Inflorescence few-flowered; peduncles to 2.5 cm long.
27. Capsule turbinate with truncate apex. Philippines. [Fig. 19.9] .... ***B. halconensis***
27. Capsule ovoid, asymmetric, nutant. China: Yunnan. [Fig. 9.22] .... ***B. anceps***
23. Petioles maximally 2–18 mm long.
28. Blades 4–7 times as long as wide.
29. Margins duplicate-serrate, at least on upper half of blade.
30. Basal auricle minute, covering less than half of the petiole; placentas bilamellate; capsule-wings subequal. Philippines. [Fig. 19.15] .... ***B. affinis***
30. Basal auricle large, covering most or all of the petiole; placentas simple; capsule-wings unequal. Brazil: São Paulo. [Fig. 19.16] .... ***B. juliana***
29. Margins regularly dentate or serrate.
31. Capsule-wings subequal, broadly rounded. Brazil: Paraná, Santa Catarina. [Fig. 19.17] .... ***B. echinosepala***
31. Capsule-wings very unequal. India. .... ?***B. griffithiana***
28. Blades 1.7–4 times as long as wide.
32. Basal auricle and lateral sinus small and inconspicuous.
33. Blades subentire; ovary fusiform, wingless; trichomes stellate. Tropical West Africa: Gabon. [Fig. 19.18] .... ***B. komoënsis***
33. Blades coarsely cut.
34. Margins ascending-serrate or duplicate-serrate; stems strongly hirsute.
35. Stipules suborbicular, conspicuous. Bolivia. [Fig. 19.6] .... ?***B. bangii***
35. Stipules narrower.
36. Tepals (outer staminate) connate. Colombia. [Fig. 19.19] .... ***B. lehmannii***
36. Tepals all free. Brazil: São Paulo. [Fig. 19.20] .... ***B. brevilobata***
34. Margins coarsely duplicate-dentate with spreading teeth.
37. Blade-base cuneate on both sides; peduncle conspicuously bracteate; staminate tepals 4. Java. [Fig. 14.43] .... ***B. lepida***
37. Blade-base broadly and evenly rounded on the abaxial side; staminate tepals 2. Philippines.
38. Blades broadly ovate; petioles 2–4 mm long. [Fig. 19.8] .... ***B. jagorii***
38. Blades mostly obovate; petioles 4–10 mm long. [Fig. 19.21] .... ***B. apayaoënsis***
32. Basal auricle and lateral sinus large and conspicuous.
39. Stipules conspicuous, persistent.
40. Blades ~3 times as long as wide; filaments united in a long, slender column. New Guina. [Fig. 19.22] .... ***Symbegonia bracteosa***
40. Blades about twice as long as wide.
41. Staminate tepals 2; stipules suborbicular. Bolivia. [Fig. 19.23] .... ***B. chaetocarpa***
41. Staminate tepals 4; stipules oblong, acuminate. Cultivated. Indonesia? [Fig. 19.24] .... ****B. rubro-setulosa***
39. Stipules inconspicuous, mostly deciduous.
42. Capsule-wings unequal.

43. Blades nearly as wide as long. China: Yunnan. [Fig. 9.22] .... ***B. anceps***
43. Blades 3–4 times as long as wide. Bolivia. [Fig. 19.25] .... ***B. leptostyla***
42. Capsule-wings equal or subequal.
44. Staminate tepals 4; placentas simple. Brazil: Santa Catarina? [Fig. 19.26] .... ***B. fuscocaulis***
44. Staminate tepals 2; placentas bilamellate.
45. Staminate tepals elliptic, 5 mm long; petioles 10 mm long. New Guinea. [Fig. 19.27] .... ***B. torricellensis***
45. Staminate tepals broadly ovate, 25 mm long; petioles 2–4 mm long. Philippines. [Fig. 19.28] .... ***B. megalantha***

Subkey 20

1. Blades rounded or broadly subacute and apiculate at apex.
2. Larger basal lobe with a sinus between it and the petiole, not auricled; petiole 12–20 mm long. Brazil.
3. Margin undulate, otherwise entire. Rio de Janeiro. [Fig. 17.16] .... ***B. arborescens***
3. Margin crenate. Ceará. [Fig. 17.17] .... ***B. pilderifolia***
2. Larger basal lobe auricled, produced laterally and covering at least the apex of the petiole.
4. Petioles maximally 5 mm long.
5. Margin undulate; capsule-wings equal. Brazil: Rio de Janeiro. [Fig. 20.1] ...... ***B. undulata***
5. Margin cut; capsule-wings very unequal.
6. Blades less than twice as wide as long, serrate, glabrous. Venezuela. [Fig. 20.2] .... ***B. meridensis***
6. Blades more than twice as long as wide, coarsely duplicate-dentate, pubescent beneath. New Guinea. [Fig. 19.3] .... ***?B multidentata***
4. Petioles maximally 8–50 mm long.
7. Staminate tepals 2; margin entire. New Guinea .... ***B. eliasii***
7. Staminate tepals 4; margin cut. Brazil.
8. Basal lobe and lateral sinus small and inconspicuous; plant large, shrubby. Rio de Janeiro. [Fig. 20.3] .... ***B. arborescens***
8. Basal lobe and lateral sinus large and conspicuous; plant low, herbaceous. Mato Grosso. [Fig. 20.4] .... ***B. lindmanii***
1. Blades sharply acute or acuminate.
9. Larger basal lobe with a sinus between it and the petiole, not auricled.
10. Staminate tepals 4, the inner pair well developed.
11. Petioles 2–8 mm long; blades 3–6 times as long as wide, narrowly acute.
12. Inflorescence few-flowered; blades entire, 4 or more times longer than wide. Tropical West Africa: Gabon. [Fig. 14.52] .... ***B. cultrata***
12. Inflorescence many-flowered, to 7 times dichotomous; blades laxly serrate. Brazil.
13. Capsule-wings subequal; blades 6 times as long as wide. Rio de Janeiro. [Fig. 15.6] .... ***B. salicifolia***
13. Capsule-wings very unequal; blades ~3 times as long as wide. Bahía. [Fig. 20.5] .... ***B. polygonifolia***
11. Petioles more than 8 mm long or the blades much broader.
14. Petioles 3–10 mm long; blades ~2 times as long as wide; anther-connective much produced.

15. Blade oblong, obliquely cordate at base. Ecuador. [Fig. 20.6] .... ***B. consobrina***

15. Blade elliptic or ovate-elliptic, retuse at base. Brazil: São Paulo. [Fig. 19.11] .... ***B. peruibensis***

14. Petioles 10–50 mm long.

16. Peduncles much exceeding the leaves. Puerto Rico. [Fig. 17.10] .... ***B. decandra***

16. Peduncles equaling to much shorter than the leaves.

17. Margin subentire or regularly dentate.

18. Blade sinuate, subentire; inflorescence not more than once dichotomous. Borneo. .... ***?B. pryerana***

18. Blade distinctly dentate.

19. Peduncles about equaling the petioles; inflorescence lax, 3 times dichotomous. India. [Fig. 20.7] .... ***B. fallax***

19. Peduncles much shorter than the petioles; inflorescence a dense cluster. Malaya. [Fig. 20.8] .... ***B. tricornis***

17. Margin duplicate-dentate or serrate with unequal projections.

20. Peduncles exceeding the petioles.

21. Plant glabrous; margin sinuate with short projections. Peru. [Fig. 20.9] .... ***?B. obtecticaulis***

21. Plant pubescent; margin coarsely duplicate-serrate. French Guiana. [Fig. 20.10] .... ***B. hirsuta***

20. Peduncles much shorter than the petioles.

22. Capsule 3-celled, unequally 3-winged. Philippines. [Fig. 19.9] .... ***?B. halconensis***

22. Capsule 4-celled, equally 4-winged. China: Yunnan. [Fig. 20.11] .... ***?B. tetragona***

10. Staminate tepals 2, or if 4 the inner pair small and often covered by the stamens.

23. Peduncles exceeding the petioles; inflorescence broad.

24. Margin duplicate-dentate or serrate.

25. Blade coarsely duplicate-serrate; plant pubescent. French Guiana. [Fig. 20.10] ***B. hirsuta***

25. Blade with fine projections; plant glabrous. Peru.

26. Upper part of stem covered with persistent imbricate stipules. [Fig. 20.9] .... ***?B. obtecticaulis***

26. Upper part of stem visible. [Fig. 20.12] .... ***B. juninensis***

24. Margin with subequal projections.

27. Blade-base distinctly cordate; petioles 12–25 mm long.

28. Inflorescence twice dichotomous; staminate tepals ovate, acute. Colombia. [Fig. 16.11] .... ***B. extensa***

28. Inflorescence to 7 times dichotomous; staminate tepals suborbicular. British Solomon Islands. [Fig. 20.13] .... ***B. somervillei***

27. Blade-base evenly rounded or slightly emarginate; petioles 4–12 mm long. Peru.

29. Blades sparsely setose. [Fig. 14.29] .... ***B. pilosella***

29. Blades glabrous.

(1859). [Fig. 20.14] .... ***B. peruviana***

(1949). [Fig. 16.13] .... ***B. rubiginosipes***

23. Peduncles shorter than the petioles or lacking and the inflorescence appearing to be 2 from the same leaf-axil.

30. Inflorescences unisexual.

31. Blades coarsely white-maculate. Philippines. [Fig. 20.15] .... ***B. leucosticta***

31. Blades concolorous.
  32. Blade-base broadly rounded or subtruncate, the larger lobe projecting slightly downward. Philippines. [Fig. 20.16] . . . . **B. esculenta**
  32. Blade-base shallowly cordate, the larger lobe projected greatly downward. China: Yunnan. [Fig. 20.11] . . . . **?B. tetragona**
30. Inflorescence bisexual, subsessile with the pistillate flowers basal, narrow pseudodichotomous; blades coarsely sinuate dentate. Philippines.
  33. Blades 5–6 times as long as wide. [Fig. 20.17] . . . . **B. oblongata**
  33. Blades somewhat more than 3 times as long as wide.
    34. Inflorescence with 3 internodes [Fig. 18.17] . . . . **B. sorsogonensis**
    34. Inflorescence with 6 internodes. [Fig. 20.18] . . . . **B. panayensis**
9. Larger basal lobe auriculate, projecting laterally over part or all of the petiole.
  35. Staminate tepals 2.
    36. Peduncles much shorter than the 8–10 mm long petioles. New Guinea. [Fig. 20.19] . . . . **B. ledermannii**
    36. Peduncle about equaling to much exceeding the petioles.
      37. Margins duplicate-dentate or serrate.
        38. Stipules broad, persistent, covering much of the stem; petioles ~6 mm long. Costa Rica. [Fig. 20.20] . . . . **B. tonduzii**
        38. Stipules narrow or quickly deciduous, exposing the stem completely.
          39. Plants with soft fibrous bases; annual or of shorter duration; leaves membranaceous.
            40. Capsule-wings subequal, lunate. Mexico and Guiana to Peru. [Fig. 20.21] . . . . **B. semiovata**
            40. Capsule-wings very unequal, the largest triangular, wider than high. Central America: Nicaragua, Costa Rica, Panama to Surinam, Colombia, and Venezuela. [Fig. 20.22] . . . . **B. filipes**
          39. Plants with firm bases, perennial.
            41. Blades acuminate from a broadly rounded or sbuacute apex, slightly inequilateral. Central America: Costa Rica, Panama. [Fig. 20.23] . . . . **B. carpinifolia**
            41. Blades acuminate from a narrowly triangular apex. India and Ceylon. [Fig. 20.24] . . . . **B. malabarica**
      37. Margins entire or with small subequal projections.
        42. Larger basal lobe biauriculate, projecting outward as well as across the petiole. Bolivia. [Fig. 20.25] . . . . **B. comata**
        42. Larger basal lobe not projecting outward.
          43. Stipules persistent, broad. Brazil.
            44. Blades broad, less than twice as long as wide; peduncles 3–4.5 cm long; pistillate bracteoles single or wanting. São Paulo. [Fig. 20.26] . . . . **B. nuda**
            44. Blades narrow, 2.5–3 times as long as wide; peduncles 5–8 cm long.
              45. Stipules elliptic-oblong, truncate, apiculate; blades subequilateral. São Paulo. [Fig. 20.27] . . . . **?B. odeteiantha**
              45. Stipules ovate, triangular-acute; blades strongly inequilateral. Santa Catarina. [Fig. 17.25] . . . . **B. konder-reisiana**
          43. Stipules deciduous, mostly narrow.
            46. Petioles maximally 40–50 mm long.
              47. Blades elliptic, acuminate; pistillate tepals 2. Peru. [Fig. 20.28] . . . . **B. glauca**

47. Blades lance-oblong, acute; pistillate tepals 3. New Guinea .... ***B. eliasii***

46. Petioles maximally 3–20 mm long.

48. Capsule-wings subequal.

49. Inflorescence (staminate) dense, up to 6 times dichotomous. British Solomon Islands. [Fig. 20.29] .... ***B. weigallii***

49. Inflorescence lax, 3 times dichotomous. Mexico, Central America. [Fig. 20.30] .... ***B. convallariodora***

48. Capsule-wings strongly unequal.

50. Petioles maximally 3 mm long. Colombia. [Fig. 17.27] .... ?***B. praerupta***

50. Petioles maximally 10–17 mm long.

51. Blade-base rounded on the abaxial side. Central America: Costa Rica, Panama. [Fig. 17.26] .... ***B. seemanniana***

51. Blade-base cuneate on both sides. Peru. [Fig. 20.31].......... ?***B. longimaculata***

35. Staminate tepals 4.

52. Peduncle much exceeding the leaves. Puerto Rico. [Fig. 17.10] .... ***B. decandra***

52. Peduncles about equaling the leaves to much shorter.

53. Petioles maximally less than 10 mm long.

54. Stipules persistent, large; blades 3–4 times as long as wide. Brazil: São Paulo.

55. Inflorescence lax; stipules elliptic-oblong, truncate, apiculate. [Fig. 20.27] .... ?***B. odeteiantha***

55. Inflorescence subdense; stipules linear-oblong, acute. (*B. simulans* Irmscher, 1953, non Merrill and Perry 1943.) [Fig. 20.32] .... ***B. larorum***

54. Stipules deciduous, mostly small.

56. Margin duplicate-dentate or serrate.

57. Basal lobe covering the whole petiole. Philippines. [Fig. 20.33] ...... ***B. agusanensis***

57. Basal lobe covering only part of the petiole. Panama, Colombia, Venezuela. [Fig. 20.34] .... ***B. guaduensis***

56. Margin entire to remotely denticulate.

58. Fruit wingless, slenderly fusiform. Tropical West Africa: Cameroon. [Fig. 20.35] .... ***B. buchholzii***

58. Fruit alate.

59. Inflorescence few-flowered.

60. Plant scandent; blades concolorous. Brazil: Rio de Janeiro. [Fig. 20.36] .... ***B. besleriifolia***

60. Plant erect; blades with large pale spots above. Peru. [Fig. 20.31] .... ?***B. longimaculata***

59. Inflorescence many-flowered.

61. Abaxial basal lobe covering the whole petiole. Colombia. [Fig. 17.27] ?***B. praerupta***

61. Abaxial basal lobe covering only a small part of the petiole. Central America: Costa Rica, Panama. [Fig. 20.37] .... ***B. estrellensis***

53. Petioles maximally more than 10 (13–70) mm long.

62. Basal lobe biauriculate with the larger auricle projecting outward; stipules imbricate, membranaceous. Bolivia. [Fig. 20.25] .... ***B. comata***

62. Basal lobe not projecting outward.

63. Peduncles shorter than the petioles.

64. Margins duplicate-serrate.

65. Stipules large, persistent; petioles 10–13 mm long; ovary with a single narrow wing.

Borneo. [Fig. 20.38] . . . . ***B. microptera***

65. Stipules inconspicuous, quickly deciduous; petioles 6–30 mm long; ovary unequally 3-winged.

66. Blades 2–3 times as long as wide, widest near middle. Philippines. [Fig. 19.9] . . . . ?***B. halconensis***

66. Blades 4–4.5 times as long as wide, widest near base. China: Taiwan. [Fig. 20.39] . . . . ***B. taiwaniana***

64. Margin sinuate or denticulate.

67. Larger basal lobe subacute; sinus narrow. Brazil: Rio de Janeiro. [Fig. 20.40] . . . . ***B. pseudolubbersii***

67. Larger basal lobe broadly rounded. Indonesia.

68. Bracts obovate, glandular-denticulate; capsule alate. Borneo . . . . ?***B. pryerana***

68. Bracts ovate; capsule wingless, turbinate. Sumatra. [Fig. 20.41] . . . . . . ***B. turbinata***

63. Peduncles longer than the petioles.

69. Margins duplicate-dentate or serrate.

70. Petioles 40–55 mm long. Brazil: Pernambuco [Fig. 20.42] . . . . ***B. pickelii***

70. Petioles 5–20 mm long.

71. Capsule turbinate, wingless. Venezuela. [Fig. 20.43] . . . . ***B. trapa***

71. Capsule ellipsoid, alate.

72. Wings subequal; blades 3–3.5 times as long as wide. Mexico and Guiana to Peru. [Fig. 20.21] . . . . ***B. semiovata***

72. Wings very unequal; blades about twice as long as broad. Colombia. [Fig. 20.44] . . . . ***B. stenocardia***

69. Margins with subequal projections or none.

73. Stipules broad, persistent. Brazil.

74. Petioles 10–15 mm long; bracts small, persistent. Bahía. [Fig. 20.45] . . ***B. bahiensis***

74. Petioles 20–50 mm long.

75. Bracts persistent, large; longer basal lobe minute. Paraná. [Fig. 20.46]. . . . . ***B. itupavensis***

75. Bracts quickly deciduous, small; longer basal lobe large. São Paulo. [Fig. 20.47] . . . . ***B. cornitepala***

73. Stipules inconspicuous or quickly deciduous.

76. Petioles maximally 40–70 mm long. Indochina.

77. Capsule-wings equal, triangular. [Fig. 20.48] . . . . ***B. geoffrayi***

77. Capsule-wings very unequal, lunate. [Fig. 20.49] . . . . ***B. boisiana***

76. Petioles maximally 17–25 mm long.

78. Margins undulate; pistillate flowers solitary. Borneo . . . . ?***B. pryerana***

78. Margins denticulate.

79. Blades acuminate from a broad apex; capsule-wings broad, strongly unequal. Mexico, Central America. [Fig. 20.30] . . . . ***B. convallariodora***

79. Blades long-attenuate from a narrowly triangular upper half; capsule equally 3-horned. Central America. [Fig. 20.50] . . . . ***B. heydei***

Subkey 21

1. Petioles maximally 5 mm long.

2. Staminate tepals 4.

3. Longer basal lobes conspicuous; blades obovate-oblong, ~2.5 times as long as wide; ovary 3-

horned. Venezuela. [Fig. 21.1] . . . . ***B. vareschii***

3. Longer basal lobes minute.

4. Marginal teeth large, spreading, conspicuous; blades narrowly lanceolate or subrhombic with upper half narrowly triangular. Philippines. [Fig. 21.2] . . . . ***?B. mindanaënsis***

4. Marginal teeth low, rounded, inconspicuous; blade subelliptic with rounded sides. Indonesia: Sumatra . . . . ***B. lepidella***

2. Staminate tepals 2.

5. Margins entire or with small subequal teeth.

6. Blades subacute, subsinuate, sparsely dentate, less than 3 times as long as wide. New Guinea. [Fig. 18.31] . . . . ***Symbegonia strigosa***

6. Blades acuminate, 3–3.5 times as long as broad.

7. Margins sparsely denticulate; stem flexuous. New Guinea. [Fig. 21.3] . . . . ***B. flexicaulis***

7. Margins entire or slightly undulate.

8. Peduncles terminal or pseudolateral, monopodial, erect. Indonesia: Celebes. [Fig. 21.4] . . . . ***B. cuneatifolia***

8. Peduncles axillary decurved. Tropical West Africa: Fernando Po. [Fig. 21.5] . . . . ***B. sessilifolia***

5. Margins duplicate-dentate or serrate, the projections coarse or unequal.

9. Leaves of subapical stem opposite. Indonesia.

10. Blades narrowly obovate-cuneate, 4 times as long as wide. Borneo. [Fig. 17.9] . . . . ***B. sympodialis***

10. Blades not more than 2.5 times as long as wide.

11. Abaxial blade-base cuneate like the adaxial. Borneo. [Fig. 14.44] . . . . ***B. longiseta***

11. Abaxial blade-base broadly rounded.

12. Capsule-wings equal. Sumatra . . . . ***?B. fasciculata***

12. Capsule-wings unequal. New Guinea. [Fig. 21.6] . . . . ***B. fruticella***

9. Leaves all alternate.

13. Plant 3.2 cm high; blades ~3 cm long. New Guinea. [Fig. 21.7] . . . ***Symbegonia parvifolia***

13. Plant and blades much larger.

14. Longer basal lobes small and inconspicuous.

15. Blade base cuneate on both sides.

16. Upper half of blade rounded to an abruptly acuminate apex; blades 2.5–3 times as long as wide. Indonesia.

17. Flowers racemose; blades duplicate-dentate. Borneo. [Fig. 21.8] . . . . ***B. artior***

17. Flowers fascicled; blades duplicate-denticulate. Philippines . . . . ***B. fasciculiflora***

16. Upper half of blade narrowly triangular; teeth large, spreading; blades 3–5 times as long as wide.

18. Internodes ~5 mm long, exceeded by the broad conspicuous stipules. Borneo. [Fig. 14.30] . . . . ***B. hulletti***

18. Internodes 10–30 mm long, much exceeding the small, narrow, inconspicuous stipules. Philippines. [Fig. 21.2] . . . . ***?B. mindanaënsis***

15. Blade-base broadly rounded on the abaxial side.

19. Blades slightly more than twice as long as wide.

20. Teeth narrow, spreading. Philippines. [Fig. 19.21] . . . . ***B. apayaoënsis***

20. Teeth low, ascending. Colombia. [Fig. 21.9] . . . . ***B. gamolepis***

19. Blades more than 3 times as long as wide.

21. Blades glabrous above. New Guinea. [Fig. 14.50] . . . . ***Symbegonia beccarii***

21. Blades pubescent above. Borneo [Fig. 14.27] .... ***B. pubescens***
14. Longer basal blade-lobe large and conspicuous.
22. Blades strongly pubescent or setose above. New Guinea.
23. Blades 2–2.5 times as long as broad, acuminate from a broad rounded apex.
24. Stipules glabrous; stamens ~8. [Fig. 21.10] .... ***B. otophora***
24. Stipules crisp-pilose; stamens 25–30. [Fig. 18.16] .... ***B. hirsuticaulis***
23. Blades 3–5 times as long as wide, the upper half narrowly triangular.
25. Capsule-wings subequal. [Fig. 18.35] .... ***B. randiana***
25. Capsule-wings very unequal. [Fig. 18.33] .... ***B. malmquistiana***
22. Blades glabrous or very sparsely and obscurely vestite above.
26. Staminate tepals broadly ovate or suborbicular. Philippines.
27. Margin coarsely and laxly dentate toward apex. [Fig. 19.28] .... ***B. megalantha***
27. Margin coarsely duplicate-serrate. [Fig. 18.18] .... ***B. samarensis***
26. Staminate tepals distinctly longer than wide. New Guinea.
28. Staminate tepals free. [Fig. 18.30] .... ***Symbegonia sanguinea***
28. Staminate tepals connate. [Fig. 6.15] .... ***Symbegonia mooreana***
1. Petioles maximally 7–90 mm long.
29. Petioles glabrous or sparsely and fugaciously vestite.
30. Staminate tepals 4.
31. Mature blades entire and subentire.
32. Stipules large, persistent; blade-base biauriculate with one auricle produced abaxially.
33. Blades 3 times as long as wide. Bolivia. [Fig. 20.25] .... ***B. comata***
33. Blades 6–7 times as long as wide. Burma. [Fig. 21.11] .... ?***B. goniotis***
32. Stipules inconspicuous or quickly deciduous.
34. Petioles 20–40 mm long.
35. Blades broadly elliptic, less than twice as long as broad, rounded at apex or minutely apiculate. Tropical West Africa: Cameroon. [Fig. 16.35] .... ***B. sanjeënsis***
35. Blades lanceolate, more than 3 times as long as wide, acuminate. Borneo . . ?***B. pryerana***
34. Petioles not over 10 mm long.
36. Blades 5–6 times as long as wide. Tropical West Africa: Cameroon. [Fig. 14.51] .... ***B. capillipes***
36. Blades not more than 3.3 times as long as wide.
37. Capsule 3-lobed, wingless, blades 3–3.3 times as long as wide. Sumatra . ***B. sarcocarpa***
37. Capsule unequally 3-winged; blades slightly more than twice as long as wide. Ecuador. [Fig. 20.6] .... ***B. consobrina***
31. Mature blades sharply cut.
38. Capsule equally 3-horned. South America.
39. Outer staminate tepals connate; capsule without a column. Ecuador. [Fig. 21.12] .... ***B. longirostris***
39. Outer staminate tepals free; capsule with a central column.
40. Blades not more than twice as long as wide; staminate tepals subequal, more or less serrulate toward apex. Colombia. [Fig. 21.13] .... ***B. umbellata***
40. Blades 2.5–7 times as long as wide; staminate tepals entire.
41. Outer staminate tepals oblong, the inner nearly as long. Venezuela. [Fig. 21.1] .... ***B. vareschii***
41. Outer staminate tepals broadly obovate, the inner much shorter. Colombia. [Fig. 6.14] ***B. hexandra***

38. Capsule alate.

42. Capsule-wings equal or subequal. Indonesia.

43. Blades twice as long as wide; staminate tepals pink or white. Philippines. [Fig. 14.39] . . . . *B. subprostrata*

43. Blades much narrower, to 4 times as long as wide; staminate tepals violet. Sumatra. [Fig. 21.14] . . . . *B. divaricata*

42. Capsule-wings strongly unequal. South America.

44. Blades about twice as long as wide; outer staminate tepals broadly ovate, 10 mm long. Colombia. [Fig. 20.44] . . . . *B. stenocardia*

44. Blades about 4 times as long as wide; outer staminate tepals narrowly lance-elliptic, 25–44 mm long. Bolivia, Argentina. [Fig. 21.15] . . . . *B. boliviensis*

30. Staminate tepals 2.

45. Upper third to half of blade narrowly triangular.

46. Blades 6–7 times as long as wide.

47. Stipules broad, persistent. Burma. [Fig. 21.11] . . . . ?*B. goniotis*

47. Stipules quickly deciduous. Philippines. [Fig. 20.17] . . . . *B. oblongata*

46. Blades 2 to less than 4 times as long as wide. Indonesia.

48. Petioles maximally 8–15 mm long.

49. Longer basal lobe broadly rounded, conspicuous. New Guinea.

50. Margin coarsely duplicate-serrate; larger basal lobe not covering the petiole. [Fig. 21.16] . . . . *B. humboldtiana*

50. Margin subentire; larger basal lobe covering the petiole. [Fig. 20.19] . . *B. ledermannii*

49. Longer basal lobe inconspicuous, much shorter than the petiole. Philippines.

51. Blades thin, 13–22 cm long; inflorescence bisexual, elongate, many-flowered, the 2 pistillate flowers basal. [Fig. 20.18] . . . . *B. panayensis*

51. Blades firm, 7 cm long, much paler beneath; inflorescence few-flowered [Fig. 14.32] . . . . *B. malindangensis*

48. Petioles maximally 20–50 mm long.

52. Margin closely double-dentate or serrate.

53. Blade over 3 times as long as wide; teeth to 12 mm long. Philippines. [Fig. 6.2] . . . . *B. quercifolia*

53. Blade about twice as long as wide; teeth 2–3 mm long. New Guinea. [Fig. 21.17] . . . . *B. simulans*

52. Margin denticulate to subentire.

54. Blades concolorous above; margin denticulate. Philippines. [Fig. 20.16] . . *B. esculenta*

54. Blades with large white spots above; margin subentire.

55. Base of blade shallowly and broadly cordate. Philippines. [Fig. 20.15] . *B. leucosticta*

55. Base of blade deeply and narrowly cordate. New Guinea. [Fig. 21.18] . . . . ?*B. spilotophylla*

45. Upper third to half of blade broadly rounded, usually acuminate.

56. Petioles maximally 40–90 mm long.

57. Blade-apex broadly rounded without any projection; blade 1.5 times as long as wide. New Guinea [Fig. 21.19] . . . . *B. subelliptica*

57. Blade-apex acute or acuminate.

58. Capsule-wings unequal.

59. Margin obscurely denticulate. New Guinea. [Fig. 21.20] . . . . *B. lauterbachii*

59. Margin undulate, crenate-serrate. Peru. [Fig. 21.21] . . . . ***B. bracteosa***

58. Capsule wings equal or subequal. Indonesia.

60. Blades broadly acute; capsule (with wings) obovate. Java. [Fig. 21.22] . . . . ***B. isoptera***

60. Blades acuminate; capsule (with wings) orbicular. Philippines. [Fig. 21.23] . ***B. everettii***

56. Petioles maximally 10–30 mm long.

61. Margins duplicate-dentate or serrate.

62. Teeth over 10 mm long, nearly as high as wide, spreading. New Guinea. [Fig. 6.12] . . . . ***B. clemensiae***

62. Teeth low and broad.

63. Inflorescence one-flowered. Africa: Congo. [Fig. 21.24] . . . . ***B. iucunda***

63. Inflorescence many-flowered. New Guinea.

64. Staminate tepals vestite. Sangir Island. [Fig. 21.25] . . . . ***B. insularum***

64. Staminate tepals glabrous. [Fig. 21.17] . . . . ***B. simulans***

61. Margins entire to dentate with small subequal teeth.

65. Stipules broad, persistent.

66. Stipules and bracts green. Tropical West Africa: Gabon. [Fig. 21.26] . . . ***B. auriculata***

66. Stipules and bracts hyaline. Bolivia. [Fig. 20.25] . . . . ?***B. comata***

65. Stipules inconspicuous or quickly deciduous.

67. Inflorescence racemose, few-flowered; staminate tepals oblong. New Guinea. [Fig. 21.27] . . . . ?***B. vanderwateri***

67. Inflorescence paniculate, many-flowered; staminate tepals broad, 6–8 mm long.

68. Capsule-wings subacute above; inflorescence broad. British Solomon Islands. [Fig. 20.29] . . . . ***B. weigallii***

68. Capsule-wings evenly rounded above; inflorescence narrow.

69. Capsule-wings rounded below. Malaya. [Fig. 21.28] . . . . ***B. pseudisoptera***

69. Capsule-wings cuneate below. New Guinea. [Fig. 18.13] . . . . ***B. naumoniensis***

29. Petioles densely and persistently vestite.

70. Staminate tepals 4.

71. Petioles maximally 25–100 mm long.

72. Capsule turbinate, equally 3-horned. Venezuela, Colombia. [Fig. 21.29] . . . . . ***B. toledana***

72. Capsule ellipsoid, 3-winged.

73. Capsule-wings equal.

74. Capsule wings very narrow, marginiform. Tropical West Africa: Cameroon to Angola. [Fig. 21.30] . . . . ***B. fusialata***

74. Capsule-wings truncate, broadly subtriangular. China: Hainan. [Fig. 21.31] . . . . ?***B. hainanensis***

73. Capsule-wings unequal.

75. Largest capsule-wing broadly rounded. Burma. [Fig. 21.32] . . . . ***B. sandalifolia***

75. Largest capsule-wing acute. Philippines. [Fig. 19.9] . . . . ?***B. halconensis***

71. Petioles maximally 10–12 mm long.

76. Blades 1.6–2.3 times as long as wide; duplicate-dentate or serrate.

77. Stipules inconspicuous or quickly deciduous. Sumatra. [Fig. 21.33] . . . . . ***B. padangensis***

77. Stipules conspicuous, persistent; larger basal lobe auricled.

78. Blades broadly rounded at apex, but slightly longer than wide; coarsely duplicate-dentate. Philippines. [Fig. 21.34] . . . . ?***B. casiguranensis***

78. Blades acuminate, at least twice as long as wide.

79. Bracts large, imbricate; stem pubescent. Java. [Fig. 14.43] . . . . ***B. lepida***
79. Blades minute; stem setose. Bolivia. [Fig. 19.6] . . . . ***?B. bangii***
76. Blades 3–4 times as long as wide.
80. Stems spreading-setose.
81. Longer basal lobe large, strongly auricled. Philippines. [Fig. 21.35] . . ***?B. dolichotricha***
81. Longer basal lobe minute. Borneo. [Fig. 14.24] . . . . ***B. lunatistyla***
80. Stems pubescent or hirtellous.
82. Capsule depressed-globose, subequally 3-winged. Brazil: Rio de Janeiro. [Fig. 16.6] . . . . ***B. oxyphylla***
82. Capsule turbinate, equally 3-horned. Colombia and Ecuador. [Fig. 21.12] . . . . ***B. longirostris***
70. Staminate tepals 2.
83. Leaves of upper stem opposite.
84. Margins duplicate-serrate. Sumatra. . . . . ***?B. fasciculata***
84. Margins dentate. New Guinea. [Fig. 21.36] . . . . ***B. filibracteosa***
83. Leaves all alternate.
85. Margins distinctly duplicate-dentate or serrate.
86. Petioles maximally 9–15 mm long.
87. Mature blades glabrous above. Philippines.
88. Capsule (including wings) truncate, triangular; blades acuminate. [Fig. 21.37] . . . . ***B. latistipula***
88. Capsule (including wings) obovate, truncate or rounded; blades acute or rounded at apex. [Fig. 21.34] . . . . ***?B. casiguranensis***
87. Mature blades vestite above.
89. Capsule-wings unequal; stipules suborbicular, setose. Bolivia. [Fig. 19.6] . . . ***?B. bangii***
89. Capsule-wings equal or subequal; stipules narrower.
90. Primary bracts of inflorescence non-foliaceous; inflorescence racemose. New Guinea. [Fig. 21.38] . . . . ***B. wariana***
90. Primary bracts of inflorescence foliaceous. Philippines.
91. Branchs of the inflorescence depauperate-paniculate. [Fig. 21.39] . . . . . . ***B. weberi***
91. Branches of the inflorescence basally dichotomous. [Fig. 21.35] . . . ***B. dolichotricha***
86. Petioles maximally 18–85 mm long.
92. Base of blade broadly rounded or cuneate, rarely faintly cordate.
93. Blades about as long as wide. Central America: Panama. [Fig. 21.40] . . . . . ***B. dressleri***
93. Blades more than twice as long as wide. China: Hainan. [Fig. 21.31] . . ***?B. hainanensis***
92. Base of blade strongly cordate or semicordate.
94. Abaxial side of base cuneate with small lobe and auricle.
95. Blades rhombic; petioles maximally 20 mm long. Tropical West Africa: Cameroon, Gabon, Congo. [Fig. 21.41] . . . . ***B. elatostemmoides***
95. Blades obovate; petioles maximally 50 mm long. Philippines. [Fig. 21.42] . . . . ***B. crispipila***
94. Abaxial side of base broadly rounded with large lobe and auricle.
96. Indument glandular. Malaya. [Fig. 21.43] . . . . ***B. barbellata***
96. Indument non-glandular. Indonesia.
97. Blades glabrous above; rounded to an acuminate apex. New Guinea. [Fig. 21.44] . . . . ***B. media***

97. Blades vestite above.
98. Blades sublobate with triangular major projects.
99. Staminate flowers axillary; blade-apex acuminate. Philippines. [Fig. 21.37] ..... ***B. latistipula***
99. Staminate flowers terminal, racemose; blade-apex triangular. Celebes. [Fig. 21.45] ..... ***B. masarangensis***
98. Blades duplicate-dentate or serrate with very broad major projections.
100. Blades acuminate. (*B. robinsonii* Merrill, 1912, non T. Moore, 1871.) Philippines ..... ***B. perryae***
100. Blades apiculate. Celebes. [Fig. 14.53] ..... ***B. hispidissima***
85. Margins entire or with small subequal projections.
101. Petioles maximally 10–15 mm long.
102. Blades ~4 times as long as wide, the abaxial side nearly twice as wide as the subentire adaxial side. Philippines. [Fig. 21.46] ..... ***B. rizalensis***
102. Blade 2.2 to ~3 times as long as broad; capsule-wings equal or subequal.
103. Flowers subsessile, axillary. Tropical West Africa: Cameroon. [Fig. 21.47] ..... ***B. loloënsis***
103. Flowers distinctly pedicellate. New Guinea.
104. Stipules linear; blades glabrous. [Fig. 21.27] ..... ***?B. vanderwateri***
104. Stipules ovate; blades hirtellous. [Fig. 21.48] ..... ***B. oxyura***
101. Petioles maximally 20–35 mm long.
105. Larger basal lobe not auriculate; inflorescence narrowly paniculate, 15–20 cm long, many-flowered. Borneo. [Fig. 21.49] ..... ***B. cincinnifera***
105. Larger basal lobe auriculate; inflorescence short, few-flowered.
106. Stipules obovate to orbicular, dentate; blades less than twice as long as wide, broadly rounded and apiculate. Tropical West Africa: Cameroon. [Fig. 21.50] .. ***B. sciaphila***
106. Stipules lanceolate.
107. Blades broadly and evenly rounded and closely denticulate adaxially; staminate tepals pubescent. (*B. richardsoniana* Merrill, 1912, non T. Moore, 1871.) New Guinea. [Fig. S22] ..... ***B. mystacina***
107. Blades nearly straight and subentire adaxially; staminate tepals glabrous. Philippines. [Fig. 21.51] ..... ***B. contracta***

Subkey 22

1. Inflorescence with a simple axis or none, not basally dichotomous.
2. Petioles strongly and persistently vestite.
3. Blades rounded at apex. Indonesia.
4 Ovary-wings unequal, angled. Moluccans. [Fig. 22.1] ..... ***?B. holosericea***
4. Ovary-wings equal, rounded. Sarawak. [Fig. 22.2] ..... ***B. promethea***
3. Blades acute, apiculate, or acuminate.
5. Petiole-trichomes flat, usually laciniate; bracts deciduous. Central America: Panama. [Fig. 22.3] ..... ***B. boquetensis***
5. Petiole-trichomes filamentous.
6. Inflorescence many-flowered, usually much exceeding the leaves. Mexico. [Fig. 22.4] ..... ***B. pinetorum***

6. Inflorescence few-flowered, barely if at all exceeding the leaves.
  7. Pistillate pedicels elongate.
    8. Blades bullate, variegated. Mexico. [Fig. 8.35] . . . . **B. imperialis**
    8. Blades even, concolorous.
      9. Blades barely oblique; capsule-wings unequal. Central America: Panama. [Fig. 21.40] . . . . **B. dressleri**
      9. Blades strongly oblique; capsule-wings subequal. China: Yunnan. [Fig. 22.5] . . . **B. tsaii**
  7. Pistillate pedicels short (0–4 mm.); inflorescence covered by the leaves. Tropical West Africa.
    10. Ovary 3-winged, 3-celled.
      11. Ovary broadly obtriangular; blades glandular-puberulent on both faces. Ghana to Congo. [Fig. 22.6] . . . . **B. cilio-bracteata**
      11. Ovary fusiform; blades laxly pilose above, glabrous beneath. Cameroon. [Fig. 22.7] . . . . **B. pseudoviola**
    10. Ovary 4-winged, 4-celled.
      12. Ovary obtriangular. Congo. [Fig. 22.8] . . . . **?B. comperei**
      12. Ovary fusiform. Nigeria. [Fig. 22.9] . . . . **B. salisburyana**
2. Petioles glabrous or sparsely vestite and glabrescent.
  13. Blades evenly rounded and without any apical projection. Brazil: Rio de Janeiro. [Fig. 22.10] . . . . **?B. rotunda**
  13. Blades acute or acuminate, more or less irregular marginally.
    14. Margins obscurely denticulate.
      15. Peduncles about equaling the petioles; pistillate tepals 2. Mexico and Central America. [Fig. 22.11] . . . . **B. plebeja**
      15. Peduncles much shorter than the petioles; inflorescence unisexual.
        16. Pistillate tepals 2; stamens 8–12; inflorescences 3–5 flowered. Tropical West Africa: Cameroon.
          (1969) . . . . **?B. reynaliorum**
          (1983) (*B. dielsiana* Gilg, 1904, non Diels, 1900.) . . . . **?B. cameroonensis**
        16. Pistillate tepals 3; stamens numerous; inflorescences many-flowered. New Guinea. [Fig. 22.12] . . . . **B. rieckei**
    14. Margins strongly dentate or serrate.
      17. Pistillate tepals 4; fruit suborbicular, equally alate.
        18. Inflorescence many-flowered, paniculate; tepals glabrous (*B. tuberosa* Lam., nom. illeg.) Indonesia: Amboina, Moluccans, Celebes. [Fig. 22.13] . . . . **B. muricata**
        18. Inflorescence few-flowered, narrow; tepals pilose. Indochina. [Fig. 8.36] . . **B. harmandii**
      17. Pistillate tepals 2.
        19. Basal bracts large, enclosing the young inflorescence. Central America: Costa Rica. [Fig. 22.14] . . . . **?B. copeyana**
        19. Basal bracts inconspicuous.
          20. Blades merely oblique to the petiole. China: Hupei, Yunnan. [Fig. 8.22] . . . . **B. henryi**
          20. Blades transverse to the petiole; peduncles much exceeding the leaves. Mexico and Central America. [Fig. 22.11] . . . . **B. plebeja**
1. Inflorescence dichotomous or rarely more divided at base, sometimes more or less asymmetric.
  21. Petioles glabrous or sparsely and fugaciously vestite.
    22. Margins entire.
      23. Blades broadly acute, ferruginous-lanate on the nerves beneath. Philippines. [Fig. 22.15] . . . . **?B. rubrifolia**

23. Blades evenly rounded throughout, glabrous. Brazil: Rio de Janeiro. [Fig. 22.10] .... ?***B. rotunda***
22. Margins variously cut or angled.
24. Blades coarsely and irregularly dark-spotted, glabrous. Mexico.
25. Staminate tepals broadly ovate. [Fig. 22.16] .... ****B. cristobalensis***
25. Staminate tepals elliptic. [Fig. 22.17] .... ****B. tacanana***
24. Blades concolorous.
26. Margins sublobate with broadly triangular projections. Mexico. [Fig. 22.18] .. ***B. pringlei***
26. Margins angled, denticulate or dentate.
27. Margins conspicuously ciliate.
28. Bracts persistent; capsule obovate, cuneate. Mexico, Central America. [Fig. 22.11] .... ***B. plebeja***
28. Bracts deciduous.
29. Peduncle distinctly longer than the petioles; capsule-wings unequal, obtuse. Madagascar. [Fig. 22.19] .... ***B. boiviniana***
29. Peduncle about equaling the petioles.
30. Pistillate tepals 3; capsule-wings subequal. Indonesia: Java .... ?***B. lobbii***
30. Pistillate tepals 2; capsule-wings unequal, the larger triangular. Mexico and Central America. [Fig. 22.11] .... ***B. plebeja***
27. Margins not notably ciliate.
31. Pistillate tepals 4; plant rhizomatous. Madagascar and vicinity.
32. Blade ovate, acute; ovary obovate. [Fig. 22.20] .... ***B. nossibea***
32. Blade orbicular; ovary oblong. [Fig. 22.21] .... ***B. fragilis***
31. Pistillate tepals 2.
33. Filaments half-connate in a column; pistillate pedicels 2 mm long. Africa: Cameroon.
(1969) .... ?***B. raynaliorum***
(1983) (*B. dielsiana* Gilg, 1904, non Diels, 1900.) .... ?***B. cameroonensis***
33. Filaments free.
34. Margins closely crenate-dentate; placentas simple. China: Hupei, Yunnan. [Fig. 8.22] .... ***B. henryi***
34. Margins remotely denticulate; placentas bilamellate; largest capsule-wing oblong, much wider than high. Central America: Costa Rica. [Fig. 22.14] .... ?***B. copeyana***
21. Petioles strongly and persistently vestite, sometimes at apex only.
35. Petioles-trichomes at least partly of broad scales or sometimes of filaments in bands.
36. Blades vestite above, at least on the nerves.
37. Blades vestite on the nerves only.
38. Inflorescence 4-branched at base; capsule-wings unequal. Central America: Panama. [Fig. 22.22] .... ***B. quaternata***
38. Inflorescence dichotomous at base; capsule-wings subequal. Central America: Honduras to Costa Rica. [Fig. 22.23] .... ***B. cardiocarpa***
37. Blades generally vestite above.
39. Stamens 23–61; blades less than twice as long as wide; inflorescences usually many-flowered.
40. Blades even. Central America, Colombia, Venezuela. [Fig. 22.24] ...... ****B. urophylla***
40. Blades foveolate. Mexico. [Fig. S23] .... ****B. carrieae***
39. Stamens 16–18.
41. Blades broadly elliptic, less than twice as long as broad; inflorescence many-flowered.

Mexico. [Fig. 22.25] . . . . ***B. hispidivillosa***

41. Blades narrowly elliptic, more than twice as long as wide; inflorescence few-flowered. Guatemala. [Fig. 22.26] . . . . ***B. louis-williamsii***

36. Blades completely glabrous above; usually broad, less than twice as long as wide.

42. Capsule-wings subequal; margins ciliate, denticulate to rarely duplicate-serrate. Mexico, Central America. [Fig. 22.27] . . . . ***B. strigillosa***

42. Capsule-wings strongly unequal.

43. Inflorescences few-flowered (to 12), mostly once or twice dichotomous.

44. Blades maximally 22.5 cm long; margin sublobate, dentate. Madagascar. [Fig. 7.1] . . . . ***B. heteropoda***

44. Blades maximally 7–13 cm long. America

45. Stigmatic tissue capitellate; peduncle exceeding the petioles; blades maximally 7.5 cm long; irregularly denticulate. Mexico. [Fig. 22.28] . . . . ***B. squarrosa***

45. Stigmatic tissue linear, spiral; peduncle shorter than the petioles. Central America: Costa Rica and Panama.

46. Capsule and wings long-pilose; blades maximally 7 cm long. [Fig. 22.29] . . ***B. vestita***

46. Capsule and wings glabrous; blades maximally 13 cm long. [Fig. 22.30] . ***B. squamosa***

43. Inflorescence many-flowered, mostly 3–6 times dichotomous.

47. Blades to 60 cm long, very shallowly triangular-lobate; petiole-trichomes entire. Mexico. [Fig. 22.31] . . . . ***B. barkeri**

47. Blades to 20 cm long.

48. Margin evenly rounded. Brazil: Rio de Janeiro. [Fig. S24] . . . . ***B. princeps**

48. Margin very irregular.

49. Margin caudate-acuminate from the ends of the principal nerves. Mexico. [Fig. 22.32] . . . . ***B. stigmosa**

49. Margin very shallowly triangular-lobate. Mexico? Described from cultivation. [Fig. 22.33] . . . . ***B. barkeri**

35. Petiole-trichomes of hairs or very narrow hair-like scales.

50. Blades bullate, pustullate-setose; peduncle equaling or exceeding the petioles; ovary usually 2-celled. Mexico. [Fig. 22.34] . . . . ***B. pustulata***

50. Blades flat.

51. Margins duplicate-dentate or duplicate-serrate with large unequal projections.

52. Petioles 4 times longer than the peduncles. Mexico? [Fig. 22.35] . . . . ***B. rhizocaulis**

52. Petioles about equaling or shorter than the peduncles.

53. Apex of blade acuminate, much narrower than the lateral projections.

54. Capsule-wings unequal; blades glabrous or sparsely glandular above; stamens 6–19. Mexico. [Fig. 22.32] . . . . ***B. stigmosa**

54. Capsule-wings subequal; blades scabrous, hirsute or rarely glabrous above; stamens 23–61. Central America, Colombia, Venezuela. [Fig. 22.24] . . . . ***B. urophylla**

53. Apex of blade similar to the marginal projections.

55. Marginal projections rounded or broadly subacute; blade shallowly cordate. Mexico. [Fig. 4.12] . . . . ***B. kortsiae***

55. Marginal projections acuminate; blade deeply and narrowly cordate. Mexico. [Fig. 2.3] . . . . ***B. polygonata***

51. Margins evenly rounded or angled, denticulate to entire or undulate.

56. Capsule-wings equal or subequal.

57. Ovary 4-celled. Africa: Congo. [Fig. 22.8] . . . . **?B. comperei**

57. Ovary 3-celled.
58. Bracts persistent, obovate or elliptic; blades ovate-orbicular, almost as wide as long; tepals vestite. Malaya. [Fig. 22.36] . . . . **_B. foxworthyi_**
58. Bracts deciduous; blades elliptic, about twice as long as wide; tepals glabrous. Mexico, Central America. [Fig. 22.27] . . . . **_B. strigillosa_**
56. Capsule-wings strongly unequal.
59. Blades strongly angled.
60. Inflorescence asymmetric; pistillate tepals 4 or 5; anthers obovate, retuse; capsule-wings mostly acute, about as high as wide. Mexico, Guatemala. [Fig. 22.4] . . ***_B. pinetorum_**
60. Inflorescence symmetric; pistillate tepals 2 or 3; anthers linear, with the connective produced; capsule-wings rounded, the largest distinctly wider than high. Mexico. [Fig. 22.37] . . . . **_B. fusca_**
59. Blades not notably angled or rarely with a single lateral angle.
61. Petiole-trichomes limited to an apical ring; pistillate tepals 5. Brazil: Bahia. [Fig. 22.38] . . . . **_B. membranacea_**
61. Petiole-trichomes widely distributed.
62. Margins entire. Philippines.
63. Blades broadly acute. [Fig. 22.15] . . . . **?_B. rubrifolia_**
63. Blades evenly rounded. [Fig. 22.39] . . . . **?_B. alvarezii_**
62. Margins denticulate or dentate or undulate.
64. Margins conspicuously ciliate.
65. Ovary 2-celled; largest wing basal. Mexico. [Fig. 22.40] . . . . **_B. fimbriata_**
65. Ovary 3-celled; largest wing extending above the ovary. Central America: Panama. [Fig. 22.41] . . . . **_B. morii_**
64. Margins not notably ciliate.
66. Largest capsule-wing higher than wide, subacute. Central America. [Fig. 22.42] . . . . **_B. sericoneura_**
66. Largest capsule-wing nearly twice as wide as high, oblong or elliptic, spreading.
67. Inflorescence 6 times dichotomous. Mexico. [Fig. 22.37] . . . . **_B. fusca_**
67. Inflorescence 3 times dichotomous. Central America, Colombia, Venezuela. [Fig. 22.24] . . . . ***_B. urophylla_**

Subkey 23

1. Petioles glabrous or sparsely and fugaciously vestite.
2. Margin entire or subentire.
3. Blades evenly rounded throughout. Brazil: Rio de Janeiro. [Fig. 22.10] . . . . **?_B. rotunda_**
3. Blades acuminate or apiculate.
4. Fruit rhomboid, acute, cuneate, 4-celled, 2-horned; blade often dark-spotted. India . . . . **_B. burkillii_**
4. Fruit broadly ovoid, 3-celled, unequally 3-winged, the largest wing dolabriform. Panama. [Fig. 23.1] . . . . **_B. garagarana_**
2. Margin variously cut or uneven.
5. Staminate tepals 5–11.
6. Tepals 4–6 mm long; styles 4-branched. Peru. [Fig. 8.31] . . . . **_B. gracillima_**
6. Tepals 6–14 mm long; styles many-branched. Peru, Bolivia. [Fig. 8.33] . . . . **_B. pleiopetala_**
5. Staminate tepals 4 or rarely 3.

7. Ovary-wings equal or subequal.
8. Ovary-wings triangular.
9. Petioles much exceeding the ovate blades and the peduncles; pistillate tepals 4. China: Yunnan. [Fig. 23.2] . . . . ***B. prostrata***
9. Petioles much shorter than the suborbicular blades and the peduncles; pistillate tepals 5. Burma. [Fig. 11.7] . . . . ?***B. triradiata***
8. Ovary-wings lunate.
10. Blades partially pubescent.
11. Inflorescence paniculate; blades undulate-dentate, much shorter than the petioles. Java. [Fig. 2.37] . . . . ***B. mollis***
11. Inflorescence racemose; blades crenate, as long as or longer than the petioles. India . . . . ***B. arnottiana***
10. Blades wholly glabrous.
12. Petioles 2–3 cm long, very slender, shorter than the blades. Philippines. [Fig. 8.47] . . . . ***B. woodii***
12. Petioles much larger, much longer than the blades. (*B. tuberosa* Lam., nom. illeg.) Java. [Fig. 22.13] . . . . ***B. muricata***
7. Ovary-wings very unequal.
13. Blades broadly acute; outer tepals vestite.
14. Filaments free; largest wing lateral the whole height of the ovary. New Guinea. [Fig. 23.3] . . . . ***B. acaulis***
14. Filaments united in a column.
15. Peduncle more than twice as long as the leaves. Siam. [Fig. 23.4] . . . . ?***B. soluta***
15. Peduncle about equaling the leaves; largest wing on the lower half of the ovary. China: Yunnan. [Fig. 23.5] . . . . ***B. duclouxii***
13. Blades acuminate.
16. Blades narrowly obovate, at least twice as long as broad. Africa: Tanganyika. [Fig. 23.6] . . . . ***B. schliebenii***
16. Blades broadly ovate, much less than twice as long as broad.
17. Inflorescence few-flowered. India. [Fig. 12.5] . . . . ***B. brevicaulis***
17. Inflorescence many-flowered. Siam. [Fig. 8.5] . . . . ***B. discreta***
1. Petioles strongly and persistently vestite.
18. Margins entire or subentire.
19. Blades ciliate. Indonesia.
20. Outer staminate tepals acuminate. Borneo. [Fig. 23.7] . . . . ***B. gueritziana***
20. Outer staminate tepals broadly rounded.
21. Largest capsule-wing broadly rounded, basal, erose; blades bicolorous. India. [Fig. 23.8] . . . . ?***B. annulata***
21. Largest capsule-wing triangular.
22. Capsule-wings subequal. Sumatra. [Fig. 23.9] . . . . ***B. ionophylla***
22. Capsule-wings strongly unequal. Philippines. [Fig. 23.10] . . . . ***B. anisoptera***
19. Blades not ciliate.
23. Blades acuminate; staminate tepals 4; pistillate tepals 5. West Indies: Haiti. [Fig. 23.11] . . . . ***B. repens***
23. Blades broadly subacute or rounded.
24. Staminate tepals 10–12; blades reniform. Peru. [Fig. 1.5] . . . . ***B. anemoniflora***
24. Staminate tepals 4; inflorescence paniculate.

25. Ovary alate. India. [Fig. 23.12] . . . . ***B. iridescens***

25. Ovary exalate. Indochina. [Fig. 23.13] . . . . ***B. balansana***

18. Blades distinctly cut.

26. Blades broadly subacute to rounded at apex.

27. Ovary equally or subequally alate or exalate.

28. Ovary 4-celled, exalate. India. [Fig. 23.14] . . . . ?***B. silletensis***

28. Ovary 3-celled, 3-alate.

29. Anthers obovate; pistillate tepals 4. Indochina. [Fig. 8.36] . . . . ***B. harmandii***

29. Anthers ellipsoid; pistillate tepals 5. Ecuador. [Fig. 23.15] . . . . ***B. xerophyta***

27. Ovary very unequally 3-alate.

30. Margin ciliate.

31. Bracts deciduous.

32. Ovary 2-celled, the largest wing attached to its basal half. China: Yunnan. [Fig. 23.5] . . . . ***B. duclouxii***

32. Ovary 3-celled, the largest wing attached to the whole length of the ovary. Philippines. [Fig. 23.16] . . . . ***B. parva***

31. Bracts persistent.

33. Tepals pilose. Siam. [Fig. 23.4] . . . . ?***B. soluta***

33. Tepals glabrous. Peru.

34. Tepals all rounded, entire; anther-connective produced; bracts glabrous. [Fig. 7.17] . . . . ****B. veitchii***

34. Tepals acute, the outer staminate ones dentate; anther-connective not produced; bracts villous. [Fig. 8.39] . . . . ***B. herrerae***

30. Margin not ciliate or obscurely so.

35. Blades strongly oblique and asymmetric, bicolorous; peduncles much exceeding the petioles.

36. Largest capsule-wing deflexed; blades with broad, dark border and center. India. [Fig. 23.17] . . . . ****B. rex***

36. Largest capsule-wing spreading or ascending; blades with larger nerves pale-bordered. West Indies: Haiti. [Fig. 23.18] . . . . ***B. leuconeura***

35. Blades slightly oblique and asymmetric, concolorous.

37. Blades broadly rounded or subtruncate at base.

38. Pistillate tepals 3; staminate tepals 4; blades broadly rounded at base. India. [Fig. 8.19] . . . . ***B. ovatifolia***

38. Pistillate tepals 6; staminate tepals 5; blades subtruncate at base. Colombia? [Fig. 23.19] . . . . ***B. novogranatae***

37. Blades deeply and closely cordate at base; placentas simple.

39. Stamens free; margin very shallowly lobed, sharply serrate. India. [Fig. 23.20] . . . . ***B. subpeltata***

39. Stamens on a column; margin evenly rounded, dentate; tepals yellow. Colombia. [Fig. 8.37] . . . . ***B. lutea***

26. Blades narrowly acute, apiculate or acuminate.

40. Fruit wingless, 4-celled; blades evenly rounded, sparsely denticulate. India.

41. Outer staminate tepals 4 mm long; blades vestite above, even. [Fig. 23.14] . ?***B. silletensis***

41. Outer staminate tepals 20 mm long; blades glabrous above, bullate. [Fig. 23.21] . . . . ***B. aborensis***

40. Fruit alate.

42. Ovary-wings equal or subequal.
  43. Blades glabrous or glabrescent above.
    44. Inflorescences subsessile. Indochina. [Fig. 23.22] .... **?*B. eberhardtii***
    44. Inflorescences pedunculate. Java. [Fig. 2.37] .... ***B. mollis***
  43. Blades vestite above.
    45. Inflorescence subumbellate. Ceylon. [Fig. 23.23] .... ***B. tenera***
    45. Inflorescence laxly racemose. Indochina. [Fig. 23.24] .... ***B. pierrei***
42. Ovary-wings distinctly unequal.
  46. Blades glabrous above or merely papillate.
    47. Pistillate tepals 2. New Guinea. [Fig. 23.25] .... **?*B. sharpeana***
    47. Pistillate tepals more than 2.
      48. Pistillate tepals 4.
        49. Blades cordate at base. Philippines. [Fig. 23.26] .... ***B. nigritarum***
        49. Blades cuneate on one side of base, auriculate on the other. (*B. dielsiana* Gilg, non E. Pritzel ex Diels.) Africa: Cameroon .... ***B. cameroonensis***
      48. Pistillate tepals 5.
        50. Peduncles and inflorescences glandular-pubescent; inflorescence elongate, paniculate. Trinidad, Venezuela. [Fig. 23.27] .... ***B. glandulifera***
        50. Peduncles and inflorescences glabrous.
          51. Petiole bearing a membranous ring at apex; inflorescence dense; stipules concealing the internodes. Brazil: Rio de Janeiro. [Fig. 23.28] .... ***B. organensis***
          51. Petiole without apical ring; inflorescence lax; stipules shorter than the internodes. West Indies: Haiti. [Fig. 23.11] .... ***B. repens***
  46. Blades vestite above.
    52. Blades rugose or bullate.
      53. Outer staminate tepals 25 mm long; blades denticulate, rugose. China: Yunnan. [Fig. 23.29] .... ****B. augustinei***
      53. Outer staminate tepals 11 mm long; blades crenulate, bullate. West Indies: Haiti. [Fig. 23.30] .... ***B. bullata***
    52. Blades even.
      54. Inflorescence 1–2-flowered; basal bracts united; plant 5–8 cm high. China: Yunnan .... ***B. parvula***
      54. Inflorescence more than 2-flowered; plant larger.
        55. Pistillate tepals 4; outer staminate tepals vestite. Siam. [Fig. 23.31] .... ***B. prolixa***
        55. Pistillate tepals 5 or rarely 6.
          56. Smaller capsule-swings marginiform; bracts deciduous. Brazil: Minas Gerais? [Fig. 23.32] .... **?*B. rubropilosa***
          56. Smaller capsule-wings triangular; bracts persistent.
            57. Outer staminate tepals and capsule-wings dentate. Peru. [Fig. 8.39] .... ***B. herrerae***
            57. Outer staminate tepals and capsule-wings entire. Ecuador. [Fig. 23.33] .... ***B. sparreana***

Subkey 24

1. Petioles glabrous or sparsely and fugaciously vestite.
  2. Margin entire or subentire.

3. Blade-apex rounded.

4. Sinus open.

5. Plant tuberous; leaf single. Madagascar. [Fig. 24.1] . . . . ***B. androrangensis***

5. Plant rhizomatous; leaves several. Philippines. [Fig. 22.39]. . . . . ?***B. alvarezii***

4. Sinus closed, the basal lobes overlapping.

6. Blades strongly asymmetric; capsule-wings subequal. Philippines. [Fig. 9.23] . ***B. trichochila***

6. Blades slightly asymmetric; plant not tuberous. Brazil: Rio de Janeiro. [Fig. 22.10] . . . . ***B. rotunda***

3. Blade apex acute to acuminate.

7. Bracts deciduous.

8. Peduncle much exceeding the petioles; inflorescence ample. Brazil: Rio de Janeiro. [Fig. 24.2] . . . . ***B. cordata***

8. Peduncle about equaling the petioles to much shorter; inflorescence few-flowered. Malaya. [Fig. 24.3] . . . . ***B. venusta***

7. Bracts persistent.

9. Blade about twice as long as wide, the upper half narrowly triangular; pistillate tepals 3. China: Kiangsi. [Fig. 24.4]. . . . . ***B. ornithophylla***

9. Blade broader, much less than twice as long as broad.

10. Staminate pedicels 6–10 mm long.

11. Blades prominently reticulate-nerved, especially beneath; fruit wingless. Indochina. [Fig. 23 13] . . . . ***B. balansana***

11. Blades not reticulate. (*B. robinsonii* Merrill, non Ridley.) Philippines. . . . . ***B. perryae***

10. Staminate pedicels 30–100 mm long.

12. Pistillate tepals 4; ovary 4-celled, 2-horned. India . . . . ***B. burkillii***

12. Pistillate tepals 5; ovary 2-celled, very unequally 3-winged. Malaya. [Fig. 24.5] . . . . ***B. maxwelliana***

2. Margin distinctly cut.

13. Blade-apex rounded.

14. Staminate tepals 9–11; pistillate tepals 8. Peru, Bolivia. [Fig. 8.33]. . . . . ***B. pleiopetala***

14. Staminate tepals 4; pistillate tepals 4–5.

15. Blades sublobate with narrow sinuses, denticulate; tepals obtuse. Ecuador. [Fig. 4.13] . . . . ***B. triramosa***

15. Blades not at all lobate.

16. Inner staminate tepals much narrower than the outer. Burma, Singapore. . . . . ***B. parvuliflora***

16. Inner staminate tepals like the outer, acute. India. . . . . ***B. tribenensis***

13. Blade-apex apiculate, acuminate or triangular-acute.

17. Blades very slightly oblique. Asia.

18. Pistillate tepals 5. Malaya. [Fig. S25] . . . . ***B. paupercula***

18. Pistillate tepals 4.

19. Inflorescence many-flowered, 2–5 times dichotomous; ovary 3-celled. Siam. [Fig. 8.5]. . . . . ***B. discreta***

19. Inflorescence few-flowered, once dichotomous.

20. Plant tuberous. China: Kweichow. [Fig. 24.6] . . . . ***B. labordei***

20. Plant rhizomatous. Siam. [Fig. 8.3] . . . . ***B. grata***

17. Blades strongly oblique to transverse.

21. Peduncle about equaling to much shorter than the petioles.
22. Pistillate tepals 3; ovary-wings subequal.
23. Basal sinus deep with overlapping lobes; margin angled, serrate. Indonesia: Sumatra. [Fig. 24.7] .... ***B. caespitosa***
23. Basal sinus shallow; margin not angled, laxly and obscurely dentate. China: Kiangsi. [Fig. 24.4] .... ***B. ornithophylla***
22. Pistillate tepals 4 or 5.
24. Pistillate tepals 5; ovary 2-celled, unequally trialate; bracts deciduous. Malaya.
25. Placentas simple. [Fig. 24.8] .... ***B. pavonina***
25. Placentas divided into several plates. [Fig. 24.3] .... ***B. venusta***
24. Pistillate tepals 4; ovary 3–4-celled, its appendages subequal.
26. Fruit bearing 2 small horns, fusiform. India .... ***B. burkillii***
26. Fruit alate. China.
27. Styles 4, bifid. Yunnan. [Fig. 23.2] .... ***B. prostrata***
27. Styles 3, much branched. Kiangsi. [Fig. 24.9] .... ***B. dielsiana***
21. Peduncle much exceeding the petioles.
28. Blades evenly rounded.
29. Capsule narrowly obovoid, asymmetric, cuneate, nutant; bracts persistent. Malaya. [Fig. 24.5] .... ***B. maxwelliana***
29. Capsule ellipsoid, symmetric, rounded, erect or suberect. Philippines.

30. Blades and stipules ciliate. [Fig. 22.15] .... ***B. rubrifolia***
30. Blades and stipules eciliate. [Fig. 24.10] .... ***B. fenicis***
28. Blades angled and undulate-dentate.
31. Staminate tepals subsimilar.
32. Blades about twice as long as wide; peduncles more than twice as long as the petioles. Jamaica. [Fig. 24.11] .... ***B. purdieana***
32. Blades nearly as wide as long; peduncles less than twice as long as the petioles. Panama. [Fig. 24.12] .... ***B. brevicyma***
31. Staminate tepals unlike, the inner pair much narrower.
33. Blades laxly setose. West Indies: Haiti. [Fig. 24.13] .... ***B. schulziana***
33. Blades glabrous. Panama.
34. Pistillate tepals 4; staminate tepals concolorous. [Fig. 24.14] .... ***B. davidsoniae***
34. Pistillate tepals 3; staminate with one outer tepal red and the others white. [Fig. 24.15] .... ***B. mucronistipula***
1. Petioles conspicuously and persistently vestite.
35. Margins entire or undulate, not notably cut.
36. Petiole-indument of stellate or fimbriate scales.
37. Pistillate tepals 3 or 4. Philippines. [Fig. 24.16] .... ***B. calcicola***
37. Pistillate tepals 5. Brazil.
38. Capsule-wings narrowly triangular. Santa Catarina.
39. Blades vestite beneath, short-ciliate; placentas simple. [Fig. 24.17] .... ***B. hilariana***
39. Blades wholly glabrous; placentas bilamellate. [Fig. 24.18] .... ***B. squamipes***
38. Capsule-wings broad, rounded or obtuse.
40. Petiole-trichomes stellate. Pernambuco. [Fig. 24.19] .... ***B. pernambucensis***
40. Petiole-trichomes of fimbriate scales. Brazil: Rio de Janeiro.

41. Blades densely hispid-pilose on both sides. [Fig. 24.20] . . . . ***B. olsoniae***
41. Blades glabrous above. [Fig. S24] . . . . ****B. princeps***
36. Petiole-indument of simple hairs.
42. Peduncle shorter than the petioles.
43. Ovary alate; blades ciliate, pustullate above.
44. Capsule nutant; largest wing oblong with deflexed upper margin; smaller wings almost lacking. Central America: Honduras. [Fig. 24.21] . . . . ***B. popenoei***
44. Capsule erect; largest wing suborbicular; smaller wings broadly lunate; pistillate tepals 3. New Guinea. [Fig. 23.25] . . . . ?***B. sharpeana***
43. Ovary wingless. Asia.
45. Blades vestite on both sides; ovary vestite. India. [Fig. 23.14] . . . . ?***B. silletensis***
45. Blades glabrous above.
46. Pistillate tepals 5; blades strongly reticulate beneath. Indochina. [Fig. 23.13] . . . . ***B. balansana***
46. Pistillate tepals 4.
47. Outer tepals and capsule pilose. India. [Fig. 23.21] . . . . ?***B. aborensis***
47. Outer tepals and capsule glabrous. China: Kwangtung. [Fig. 24.22] . . . . ***B. leprosa***
42. Peduncle longer than the petioles.
48. Bracts persistent.
49. Ovary-wing single; ovary 2-celled. India. [Fig. 23.12] . . . . ***B. iridescens***
49. Ovary-wings 3; ovary 3-celled.
50. Blades pilose above; pistillate tepals 3. Indochina. [Fig. 24.23] . . . . ***B. bonii***
50. Blades glabrous above.
51. Pistillate tepals 5. West Indies: Haiti. [Fig. 23.11] . . . . ***B. repens***
51. Pistillate tepals 4. Philippines. [Fig. 9.23] . . . . ?***B. trichochila***
48. Bracts deciduous.
52. Mature blades prominently ciliate. Indonesia.
53. Pistillate bracteoles large, petaloid, persistent; inflorescence 3–4 times dichotomous; outer staminate tepals broadly rounded. New Guinea. [Fig. 23.25]. . . . . . . ?***B. sharpeana***
53. Pistillate bracteoles deciduous or lacking.
54. Primary branches of the inflorescence 5 cm long. Philippines. [Fig. 22.15] . . . . ?***B. rubrifolia***
54. Primary branches of the inflorescence only about 1 cm long.
55. Blades concolorous. Borneo. [Fig. 23.7] . . . . ***B. gueritziana***
55. Blades variegated. India. [Fig. 23.8] . . . . ?***B. annulata***
52. Mature blades eciliate.
56. Placentas simple; pistillate tepals 5. Brazil: Rio de Janeiro.
57. Outer staminate tepals suborbicular, shallowly cordate; blade-apex broadly rounded. [Fig. 24.24] . . . . ***B. fluminensis***
57. Outer staminate tepals triangular-ovate, deeply cordate; blade-apex apiculate. [Fig. 24.25] . . . . ***B. friburgensis***
56. Placentas bilamellate.
58. Pistillate bracteoles persistent, covering the ovary; pistillate tepals 2 or 3. Central America. [Fig. 22.42] . . . . ***B. sericoneura***
58. Pistillate bracteoles deciduous or lacking. Philippines.
59. Capsule-wings subequal; blade-apex rounded; sinus narrow with overlapping lobes.

[Fig. 9.23] . . . . ?***B. trichochila***

59. Capsule-wings unequal; blade-apex triangular, obtuse; sinus broad and shallow. [Fig. 24.26] . . . . ***B. longiscapa***

35. Margins variously cut or irregular.

60. Petiole trichomes stellate or fimbriate.

61. Blades completely glabrous above.

62. Staminate tepals sometimes 3; blade orbicular, irregularly dentate. Madagascar. [Fig. 7.1] . . . . ***B. heteropoda***

62. Staminate tepals 4.

63. Blade acuminate; pistillate tepals 4. Philippines? . . . . ***B. oxysperma***

63. Blade broadly rounded or apiculate; pistillate tepals 5. Brazil: Rio de Janeiro. [Fig. 24.27] . . . . ****B. ramentacea***

61. Blades vestite above at least on the nerves.

64. Blades very broadly subacute; placentas entire. Brazil.

65. Anthers emarginate; largest capsule-wing higher than wide, subacute; petiole-trichomes stellate. Pernambuco. [Fig. 24.19] . . . . ***B. pernambucensis***

65. Anthers with connective produced; largest capsule-wing wider than high, broadly rounded; petiole-trichomes fimbriate. Rio de Janeiro. [Fig. 24.20] . . . . ***B. olsouiae***

64. Blades acuminate, apiculate, or acute.

66. Blades shallowly and broadly cordate, apiculate; placentas bilamellate. Philippines. [Fig. 24.16] . . . . ***B. calcicola***

66. Blades deeply and narrowly cordate, acute or acuminate. Brazil.

67. Bracts persistent; placentas bilamellate. Minas Gerais? [Fig. 23.32] . . . . . ***B. rubropilosa***

67. Bracts deciduous; placentas simple. Rio de Janerio. [Fig. 24.28] . . . . . ***B. magdalenensis***

60. Petiole-trichomes simple, filamentous or rarely somewhat flattened.

68. Peduncles about equaling the petioles to much shorter.

69. Blade-apex rounded or broadly subacute.

70. Fruit wingless, 4-celled; pistillate tepals 4. India. [Fig. 23.14] . . . . ?***B. silletensis***

70. Fruit alate 3-celled; blades slightly oblique.

71. Placentas simple; capsule-wings subequal; plant rhizomatous. Borneo, Sumatra, Java. [Fig. 2.37] . . . . ***B. mollis***

71. Placentas bilamellate; plant tuberous.

72. Styles multifid; stigmas spherical. Argentina. [Fig. 8.30] . . . . ?***B. rubricaulis***

72. Styles bifid; stigmas linear, continuous, spiral.

73. Capsule-wings subequal. India, Ceylon. [Fig. 8.6] . . . . ***B. cordifolia***

73. Capsule-wings unequal. India. [Fig. 8.19] . . . . ***B. ovatifolia***

69. Blade-apex narrowly acute, apiculate, or acuminate.

74. Blades glabrous above.

75. Fruit wingless; pistillate tepals 4; blades evenly rounded.

76. Blades bullate; ovary 4-celled. India. [Fig. 23.21] . . . . ?***B. aborensis***

76. Blades even; ovary 3-celled. China: Kwangtung. [Fig. 24.22] . . . . ***B. leprosa***

75. Fruit alate.

77. Blades evenly rounded; ovary 3-celled.

78. Ovary-wings subequal, lunate. Philippines. [Fig. 24.29] . . . . ***B. biliranensis***

78. Ovary-wings unequal. Central America: Honduras. [Fig. 24.21] . . . . ***B. popenoei***

77. Blades duplicate-dentate to shallowly lobate.

79. Inflorescences pedunculate; pistillate tepals 8. India. [Fig. 24.30] . . . . . . ***B. beddomei***
79. Inflorescences subsessile. Indochina: Annam. [Fig. 23.22] . . . . ***B. eberhardtii***
74. Blades more or less vestite above.
80. Margins evenly rounded and nearly uniformly cut.
81. Capsule-wings subequal. China: Yunnan. [Fig. 22.5] . . . . ***B. tsaii***
81. Capsule-wing unequal.
82. Smaller capsule-wings minimal. Central America: Honduras. [Fig. 24.21] . . . . ***B. popenoei***
82. Smaller capsule-wings well developed.
83. Pistillate tepals 5; smaller capsule-wings subquadrate. Malaya. [Fig. 24.5] . . . . ***B. maxwelliana***
83. Pistillate tepals 4; smaller capsule-wings triangular. Siam. [Fig. 23.31] . . . ***B. prolixa***
80. Margins unevenly cut.
84. Blades shallowly lobate, coarsely dentate or serrate.
85. Trichomes forming a ring at the apex of the petiole; pistillate tepals 5. Brazil: Bahia. [Fig. 24.31] . . . . ***B. neglecta***
85. Trichomes generally distributed along the petiole; ovary 2-celled India.
86. Pistillate tepals 6. [Fig. 8.26] . . . . ***B. aliciae***
86. Pistillate tepals 8. [Fig. 24.30] . . . . ***B. beddomei***
84. Blades not at all lobate, dentate at the ends of the larger nerves and denticulate between. China.
87. Ovary 3-celled; pistillate tepals 3 or rarely 4. Kiangsi. [Fig. 24.32] . . . . . ***B. filiformis***
87. Ovary one-celled.
88. Pistillate tepals 5; margins eciliate at maturity. Yunnan . . . . ***B. obsolescens***
88. Pistillate tepals 3; blades bicolorous.
89. Blades centrally pale. Kiangsi. [Fig. 24.33] . . . . ***B. morsei***
89. Blades centrally dark. Kiangsi or Kweichow? [Fig. S26] . . . . ****B. masoniana***
68. Peduncles much exceeding the petioles.
90. Blades broadly subacute to rounded at apex.
91. Blades regularly cut and evenly rounded.
92. Staminate and pistillate tepals acute, red. Ecuador. [Fig. 8.38] . . . . ****B. froebellii***
92. Staminate tepals rounded at apex.
93. Staminate tepals 9–11, glabrous. Peru, Bolivia. [Fig. 8.33] . . . . ***B. pleiopetala***
93. Staminate tepals 4, the outer pair glandular-pubescent. Malaya. [Fig. 7.11] . . ***B. nurii***
91. Blades unevenly cut.
94. Blades undulate or shallowly lobate.
95. Blades only slightly oblique.
96. Staminate tepals 4; styles bifid; stigmatic tissue linear, spiral. Peru. [Fig. 7.17] . . . . ****B. veitchii***
96. Staminate tepals 5 or 6; styles multifid; stigmatic tissue globose. Argentina. [Fig. 8.30] . . . . ?***B. rubricaulis***
95. Blades strongly oblique to transverse.
97. Inflorescence 1–2 times dichotomous; capsule-wings equal. China: Yunnan. [Fig. 23.5] . . . . ***B. duclouxii***
97. Inflorescence 3–4 times dichotomous; capsule-wings unequal. Brazil: Bahia. [Fig. 24.34] . . . . ***B. saxifraga***

94. Blades evenly rounded with larger teeth at the ends of the principal nerves and smaller ones between; pistillate tepals 5. India. [Fig. 23.17] . . . . ***B. rex**

90. Blades narrowly acute, acuminate or apiculate.

98. Blades evenly cut and rounded, vestite above.

99. Pistillate tepals 5; ovary-wings unequal. Malaya.

100. Blades sparsely rusty-pubescent above with compressed hairs. [Fig. 24.5] . . . . ***B. maxwelliana***

100. Blades sparsely papillose-setose above . . . . ***B. decora***

99. Pistillate tepals 3 or 4.

101. Ovary-wings subequal; pistillate tepals 3. Indochina. [Fig. 24.35] . . . . . ***B. tonkinensis***

101. Ovary-wings very unequal; pistillate tepals 4. Siam. [Fig. 23.31] . . . . ***B. prolixa***

98. Blades unevenly cut, sublobate or angled.

102. Blades evenly rounded but with larger teeth at the principal nerve-ends than in between; pistillate tepals 5.

103. Blades glabrous above. West Indies: Haiti. [Fig. 23.11] . . . . ***B. repens***

103. Blades vestite above.

104. Upper margin of largest capsule-wing reflexed; style-branches spiral; placentas bipartite. China: Yunnan. [Fig. 24.36] . . . . ***B. setifolia***

104. Upper margin of largest capsule-wing ascending; style-branches not spiral.

105. Peduncles glabrous; outer staminate tepals elliptic; pistillate tepals obovate. West Indies: Jamaica. [Fig. 24.11] . . . . ***B. purdieana***

105. Peduncles pubescent; outer staminate tepals broadly ovate; pistillate tepals elliptic or narrowly ovate; placentas simple. Brazil: Espirito Santo. [Fig. 24.37] . . . . ***B. itaguassuensis***

102. Blades angled or sublobate or duplicate-dentate, not evenly rounded.

106. Blades sinuate between angles with broad sinuses.

107. Blades with narrowly triangular upper half; petiole-trichomes large, spreading; capsule-wings broadly rounded. Philippines.

108. Male flowers white; capsules 12 mm long. [Fig. 24.38] . . . . ***B. klemmei***

108. Male flowers pink, capsules 20 mm long. [Fig. 24.39] . . . . ***B. vanoverberghii***

107. Blades rounded to an apiculate or acuminate apex.

109. Blades vestite above.

110. Blades even, concolorous above; ovary 3-celled. Central America. [Fig. 22.42] . . . . ***B. sericoneura***

110. Blades foveolate, marked with a broad black cross above; ovary one-celled. China? [Fig S26] . . . . ***B. masoniana**

109. Blades glabrous above. Indonesia.

111. Trichomes of flattened hair-like scales. Sumatra . . . . ***B. hasskarliana***

111. Trichomes terete, filamentous. Philippines.

112. Blades obovate, obscurely cordate; capsule-wings unequal. [Fig. 24.40] . . . . ***B. isabelensis***

112. Blades broadly elliptic or ovate, strongly cordate.

113. Capsule-wings unequal. [Fig. 24.41] . . . . ***B. manillensis***

113. Capsule-wings subequal. [Fig. 23.26] . . . . ***B. nigritarum***

106. Blades broadly and shallowly lobed with narrow sinuses.

114. Inflorescence 5–6 times dichotomous, many-flowered; pistillate tepals 2. Mexico.

[Fig. 22.37] . . . . **B. fusca**
114. Inflorescence 1–3 times dichotomous; few-flowered.
115. Blades glabrous above, strongly oblique; pistillate tepals 4. Philippines. [Fig. 24.26] . . . . **B. longiscapa**
115. Blades vestite above.
116. Blades densely ciliate; pistillate tepals 5. Malaya . . . . **B. decora**
116. Blades obscurely ciliate if at all; bracts deciduous.
117. Tepals yellow; capsule pendant, asymmetric. India. [Fig. 24.42] . . . **B. xanthina**
117. Tepals white sometimes tinged with red.
118. Blades strongly oblique, 3–6 cm long. West Indies: Haiti. [Fig. 24.13] . . . . **B. schulziana**
118. Blades slightly oblique, 14–17 cm long. Peru. [Fig. 24.43] . . . . **B. tumbezensis**

Subkey 25

1. Inflorescence with a simple axis or none, not basally dichotomous.
2. Petioles glabrous or glabrescent.
3. Margins entire or subentire.
4. Blades bicolorous; pistillate tepals 5; wings shorter than the ovary. New Guinea. [Fig. 21.18] . . . . **B. spilotophylla**
4. Blades concolorous.
5. Inflorescences capituliform, axillary. Tropical West Africa: Guinea. [Fig. 25.1] . . ?**B. ampla**
5. Inflorescences open.
6. Inflorescences subracemose, 12–18 cm long; pistillate tepals 2. Philippines. [Fig. 25.2] . . . . **B. zamboangensis**
6. Inflorescence one-flowered. Indonesia: Moluccas. [Fig. 25.3] . . . . **B. carnosa**
3. Margins distinctly cut.
7. Blades shallowly cordate to broadly rounded at base.
8. Odd capsule-wing smaller than the other two, all obtuse; blades nearly or quite as wide as long, to 2.1 cm long. Africa: Zambia . . . . **B. pygmaea**
8. Odd capsule-wing larger than the other two, triangular; blade nearly or quite twice as long as wide, to 7.5 cm long; pistillate tepals 5. Borneo . . . . **B. pendula**
7. Blades deeply cordate at base.
9. Inflorescences equaling or exceeding the petioles; pistillate tepals 2; blades nearly or quite as broad as long.
10. Margin crenate-dentate; blades only slightly oblique. China: Hupei, Yunnan. [Fig. 8.22] . . . . **B. henryi**
10. Margin undulate with widely spaced projections. Philippines.
11. Marginal projections low and very broad; blades less than twice as long as wide. [Fig. 25.2] . . . . **B. zamboangensis**
11. Marginal projections high and narrow; blades more than twice as long as broad. [Fig. 14.39] . . . . **B. subprostrata**
9. Inflorescence shorter than the petioles, 1–6-flowered.
12. Capsule-wings narrowly marginiform to lacking; blades sublobate, more than twice as long as wide. Central America: Honduras. [Fig. 25.4] . . . . **B. yunckeri**
12. Capsule-wings well developed.

13. Blades more than twice as long as wide.
14. Ovary oblong, 5 times as long as wide; wings triangular. Indonesia: Celebes. [Fig. 25.5] . . . . ***B. sarasinorum***
14. Ovary subglobose; wings semiorbicular. Philippines. [Fig. 25.6] . . . . ***B. colorata***
13. Blades broad, much less than twice as long as wide.
15. Inflorescence capituliform, to 6-flowered; blades undulate, acuminate. Bismarck Archipelago. [Fig. 25.7] . . . . ***B. peekelii***
15. Inflorescence (pistillate) one-flowered; blades sublobate, the broadly acute apex little larger than the other projections. Celebes. [Fig. 25.8] . . . . ***B. gemella***
2. Petioles persistently vestite.
16. Blades about twice as long as wide or narrower.
17. Petioles maximally 1.5 cm long.
18. Inflorescence cupuliform; blades entire. Africa: Guinea. [Fig. 25.9] . . . . ***B. poculifera***
18. Inflorescence lax, paniculate; blades coarsely sinuate-dentate. Philippines. [Fig. 14.28] . . . . ***B. urdanetensis***
17. Petioles maximally 3–6 cm long.
19. Pistillate tepals 2; petioles 4–6 cm long. Mexico. [Fig. 25.10] . . . . ***B. aridicaulis***
19. Pistillate tepals 5; petioles 1–3 cm long. Philippines. [Fig. 14.42] . . . . ***B. macgregorii***
16. Blades wider, much less than twice as long as wide.
20. Inflorescence about equaling to exceeding the petioles.
21. Inflorescence paniculate; pistillate tepals 2. Malaya . . . . ***B. yappii***
21. Inflorescence unbranched one–few-flowered.
22. Bracts deciduous; blades 4–8 cm long; pistillate tepals 2. Mexico. [Fig. 25.11] . . . . ***B. violifolia***
22. Bracts persistent.
23. Ovary unappendaged; indument of scales; blades 8–30 cm long. Africa: Cameroon, Congo. [Fig. 25.1] . . . . ***?B. ampla***
23. Ovary unequally trialate; indument filamentous; blades 1.5–2.3 cm long. Brazil: Rio de Janeiro. [Fig. 25.12] . . . . ***?B. herteri***
20. Inflorescence much shorter than the petioles.
24. Ovary fusiform, 4-alate; pistillate tepals 2. Africa: Nigeria. [Fig. 22.9] . . . . ***B. salisburyana***
24. Ovary ellipsoid, 3-alate or angled.
25. Ovary-wings narrowly marginiform or lacking. Central America: Honduras. [Fig 25.4] . . . . ***?B. yunckeri***
25. Ovary-wings well developed; pistillate tepals 5. Indonesia: Celebes.
26. Blades with broad projections. [Fig. 25.13] . . . . ***B. flacca***
26. Blades with narrow, caudate projections. [Fig. 25.14] . . . . ***B. strachwitzii***
1. Inflorescence basally dichotomous.
27. Petioles glabrous or glabrescent.
28. Blades at least twice as long as wide.
29. Peduncle exceeding the petioles.
30. Petioles 10–17 cm long; blades undulate or subentire. Philippines. [Fig. 25.15] . . . . ***B. caudata***
30. Petioles to 4 cm long; blades denticulate to duplicate-serrate.
31. Pistillate tepals 5; petioles 1–4 cm long. Colombia, Venezuela. [Fig. 25.16] . . . . ***B. denticulata***
31. Pistillate tepals 2 or 3; petioles 0.5–1.2 cm long. Peru. [Fig. 14.29] . . . . ***B. pilosella***

29. Peduncle about equaling the petioles to much shorter; blades only slightly oblique.
32. Blades pale-spotted, 13–23 cm long; stems flexuous; stipules subpersistent; petioles 4–6 cm long. New Guinea. [Fig. 21.18] . . . . ?***B. spilotophylla***
32. Blades concolorous, 7–15 cm long; petioles 2–3 cm long.
33. Stems geniculate. Indonesia: Celebes. [Fig. 25.5] . . . . ?***B. sarasinorum***
33. Stems straight. Philippines. [Fig. 14.33] . . . . ***B. binuangensis***
28. Blades broad, less than twice as long as wide.
34. Peduncles about equaling or shorter than the petioles.
35. Capsule-wings subequal, narrow; placentas simple. Indonesia: Celebes. [Fig. 5.18] . . . . ***B. bonthainensis***
35. Capsule-wings very unequal; placentas bilamellate.
36. Blades angled or more often with several caudate projections; capsule nutant; largest capsule-wing ovate, basal, reflexed. Mexico. [Fig. 25.17] . . . . ***B. ludicra***
36. Blades not angled nor caudate-appendaged; capsule-wings spreading.
37. Margin sublobate-dentate; petioles about 4 times as long as the peduncle. Cultivated. Central America. [Fig. 22.35] . . . . ****B. rhizocaulis***
37. Margin laxly denticulate; petioles and peduncle subequal. Mexico and Central America. [Fig. 22.11] . . . . ***B. plebeja***
34. Peduncles much longer than the petioles.
38. Internodes short and stout; blades entire; ovary 2-celled. Philippines.
39. Blades glabrous. [Fig. 22.39] . . . . ***B. alvarezii***
39. Blades ferruginous-lanate on the nerves beneath. [Fig. 22.15] . . . . ?***B. rubrifolia***
38. Internodes long and slender.
40. Blades transverse; ovary 2-celled. Central America: El Salvador. [Fig. 25.18] . . . . ***B. assurgens***
40. Blades slightly oblique.
41. Margin undulate, obscurely dentate; inflorescence 3 times dichotomous; placentas bilamellate. Philippines. [Fig. 25.15] . . . . ***B. caudata***
41. Margin coarsely crenate-dentate; inflorescence once dichotomous; placentas simple. China: Hupeh. [Fig. 8.22] . . . . ***B. henryi***
27. Petioles strongly and persistently vestite.
42. Blades about twice as long as wide or narrower.
43. Petioles 1–3 cm long; blades not ciliate.
44. Blades narrowly ovate; capsule-wings wider than high, narrowly triangular. West Africa: Gabon. [Fig. 14.54] . . . . ***B. aggeloptera***
44. Blades oblanceolate; capsule-wings higher than wide. Philippines. [Fig. 14.42] . . . . ***B. macgregorii***
43. Petioles 4–20 cm long.
45. Inflorescences usually few-flowered; pistillate bracteoles lacking. Mexico, Central America. [Fig. 22.27] . . . . ***B. strigillosa***
45. Inflorescence usually many-flowered; pistillate bracteoles present. Central America. [Fig. 22.23] . . . . ***B. cardiocarpa***
42. Blades broad, distinctly less than twice as long as wide.
46. Petioles maximally 10 cm long; capsule-wings unequal; blade-margins ciliate.
47. Blades bicolorous with large marginal dark spots, long-ciliate; pistillate tepals 2. Mexico. [Fig. 25.19] . . . . ***B. bowerae***
47. Blades concolorous.

48. Internodes long and slender, much exceeding the stipules; ovary 2-celled. Mexico. [Fig. 25.11] .... ***B. violifolia***

48. Internodes short and thick, covered by the imbricate stipules; ovary 3-celled.

49. Peduncle 10–11 cm long, much exceeding the petioles; blades broadly subacute. Philippines. [Fig. 25.20] .... ?***B. castilloi***

49. Peduncle 2.2 cm long, slightly if at all exceeding the petioles; blades acuminate. Brazil. [Fig 25.12] .... ?***B. herteri***

46. Petioles maximally 13–150 cm long.

50. Capsule-wings equal or subequal; blades glabrous above.

51. Placentas simple; inflorescence pilose; internodes short and thick. Malaya. [Fig. 22.36] .... ***B. foxworthyi***

51. Placentas bilamellate; internodes longer than thick.

52. Ovary 2-celled; blades undulate-lobate to subentire. Philippines. [Fig. 25.21] .... ***B. pinamalayensis***

52. Ovary 3-celled; blades denticulate to duplicate-serrate. Central America: Honduras to Costa Rica. [Fig. 22.23] .... ***B. cardiocarpa***

50. Capsule-wings strongly unequal.

53. Inflorescence 4–6 times dichotomous; petioles maximally 60–150 cm long; blades serrulate, more or less undulate; capsule-wings dolabriform, spreading. Mexico. [Fig. 22.37] .... ***B. fusca***

53. Inflorescence 1–3 times dichotomous; petioles maximally 13–30 cm long.

54. Blades glabrous above or vestite only on the principal nerves.

55. Blades angled or more often with several caudate projections; capsule nutant; largest capsule-wing ovate, basal, reflexed. Mexico. [Fig. 25.17] .... ***B. ludicra***

55. Blades evenly rounded; capsule-wings spreading. Central America.

56. Blades hirsute on principal nerves above, ciliate. Panama. [Fig. 25.22] .... ***B. croatii***

56. Blades complete glabrous above and on margins. Costa Rica. [Fig. 22.14] .... ***B. copeyana***

54. Blades evenly vestite above.

57. Ovary 2-celled; blades sublobate wtih caudate projections. China: Yunnan.

58. Basal blade-lobes overlapping; blades variegated beneath. [Fig. 25.23] .. ***B. versicolor***

58. Basal blade-lobes separated; blades concolorous beneath. [Fig. 25.24] .... ***B. repenticaulis***

57. Ovary 3-celled.

59. Blades suborbicular without a distinct apex, but one nerve somewhat longer than the others. Mexico. [Fig. 4.12] .... ****B. kortsiae***

59. Blades with a distinct acute or acuminate apex.

60. Petiole-indument of scales.

61. Blades even. Central America, northeastern South America. [Fig. 22.24] .... ***B. urophylla***

61. Blades foveolate. Mexico. [Fig. S23] .... ****B. carrieae***

60. Petiole-indument of hairs. Central America. [Fig. 22.42] .... ***B. sericoneura***

Subkey 26

1. Axis of inflorescence simple or none, not dichotomous at base but sometimes at apex.

2. Petiole glabrous or glabrescent.

3. Margins entire or subentire.

4. Blades ovate, nearly twice as long as wide. (*B. purpurea* Elmer, non Swartz.) Philippines. [Fig. 26.1] . . . . ***B. neopurpurea***

4. Blades suborbicular. New Guinea.

5. Peduncles about equaling the petioles; blades concolorous. [Fig. 26.2] . . . ***B. subcyclophylla***

5. Peduncles much shorter than the petioles; blades darkened along the larger nerves; pistillate tepals 3. [Fig. 9.4] . . . . ***B. bartlettiana***

3. Margins distinctly cut.

6. Mature blades about twice as long as wide.

7. Peduncles about equaling to shorter than the petioles.

8. Petioles maximally 20 cm long; outer staminate tepals 3 cm long, ovary-wings subequal. Indochina. [Fig. 26.3] . . . . ***B. lecomtei***

8. Petioles maximally 6 cm long.

9. Margins undulate-dentate; stems geniculate. Borneo: Sarawak. [Fig. 26.4] . ***B. havilandii***

9. Margins sublobate with broad, rounded projections; stems straight. Indonesia: Celebes. [Fig. 25.5] . . . . ?***B. sarasinorum***

7. Peduncles exceeding the petioles.

10. Ovary turbinate, equally 3-horned; petioles maximally 3 cm long. Venezuela. [Fig. 26.5] . . . . ***B. mariae***

10. Ovary ellipsoid, alate; petioles maximally 8.5–11 cm long.

11. Blade-apex narrowly triangular; ovary-wings narrowly marginiform. Central America: Honduras. [Fig. 25.4] . . . . ?***B. yunckeri***

11. Blade-apex broadly subacute, then acuminate; ovary-wings triangular, unequal. West Africa: Tanganyika. [Fig. 23.6] . . . . ***B. schliebenii***

6. Blades less than twice as long as wide, broadly ovate or elliptic to suborbicular.

12. Peduncles about equaling to shorter than the petioles.

13. Blades finely cut to subentire, suborbicular, bicolorous with dark stripes along the larger nerves. New Guinea. [Fig. 9.4] . . . . ***B. bartlettiana***

13. Blades sublobate with broadly triangular projections, concolorous.

14. Internodes long and slender. Indonesia: Celebes. [Fig. 25.8] . . . . ?***B. gemella***

14. Internodes very short and stout. China.

15. Blades slightly oblique; ovary ellipsoid, unequally trialate, 3-celled. Kweichow. [Fig. 5.28] . . . . ?***B. smithiana***

15. Blades transverse; ovary turbinate, unappendaged, 4-celled. Tonkin. [Fig. 26.6] . . . . ***B. handelii***

12. Peduncles distinctly longer than the petioles.

16. Petioles maximally 1.5 cm long; blades shallowly and irregularly lobed, mottled with gray. Philippines. [Fig. 26.7] . . . . ***B. serpens***

16. Petioles maximally 11–12 cm long.

17. Third ovary-wing smaller than the other two. China: Yunnan. [Fig. 23.5] . ***B. duclouxii***

17. Third ovary-wing larger than the other two. Siam. [Fig. 8.3] . . . . ?***B. grata***

2. Petioles strongly and persistently vestite.

18. Peduncles (bisexual or staminate) exceeding the petioles.

19. Rhizome-internodes long and slender.

20. Blades elliptic, attenuate, coarsely sinuate-dentate. Philippines. [Fig. 14.39] . . . . ?***B. subprostrata***

20. Blades broadly ovate to suborbicular, broadly acute, closely dentate. India.

21. Outer staminate tepals 3 mm long; pistillate tepals 5. [Fig. 26.8] . . . . ***B. wengeri***
21. Outer staminate tepals 20 mm long; pistillate tepals 4. [Fig. 26.9] . . . . ***B. scintillans***
19. Rhizome-internodes very short and stout.
22. Floral axis elongate. Siam . . . . ***B. festiva***
22. Floral axis short to none.
23. Petioles maximally 12–20 cm long.
24. Blades prominently reticulate beneath; peduncle slightly exceeding the petioles. China: Yunnan. [Fig. 26.10] . . . . ***B. forrestii***
24. Blades not notably reticulate beneath; peduncle much exceeding the petioles. Brazil: Rio de Janeiro. [Fig. 26.11] . . . . ***B. itatiaiensis***
23. Petioles maximally 4–9.5 cm long.
25. Blades entire or subentire.
26. Pistillate tepals 3. Indochina. [Fig. 24.23] . . . . ***B. bonii***
26. Pistillate tepals 4. Madagascar. [Fig. 3.20] . . . . ***B. mangorensis***
25. Blades dentate. China.
27. Ovary 2-celled. Szechuan. [Fig. 26.12] . . . . ***B. limprichtii***
27. Ovary one-celled; placentas parietal. Kweichow. [Fig. 26.13] . . . . ?***B. porteri***
18. Peduncles (bisexual or pistillate) about equaling to shorter than the petioles.
28. Blades coarsely duplicate-dentate to sublobate, glabrous above.
29. Ovary-wings equal, together obovate, truncate. Indochina. [Fig. 23.22] . . . ?***B. eberhardtii***
29. Ovary-wings unequal.
30. Petioles generally vestite, ~12 cm long. Africa: Congo . . . . ***B. bequaertii***
30. Petioles with a ring of trichomes at apex, 3–7 cm long. China: Hong Kong. [Fig. 9.15] . . . . *****B. bowringiana***
28. Blades finely and rather regularly cut.
31. Internodes long and slender.
32. Blades twice as long as wide, pistillate tepals 5. Borneo. [Fig. 26.14] . . . . . ***B. adenostegia***
32. Blades much less than twice as long as wide.
33. Inflorescence elongate, much exceeding the leaves. Borneo. [Fig. 26.15] . . ***B. adenodes***
33. Inflorescence about equaling the leaves or shorter.
34. Pistillate tepals 3; petioles 3–6 cm long. New Guinea. [Fig. 9.4] . . . . . . ***B. bartlettiana***
34. Pistillate tepals 5; petioles 2–10(–20) cm long. Malaya. [Fig. 12.18] . . . . ***B. guttata***
31. Internodes very short and stout.
35. Petioles maximally 12–31 cm long.
36. Margin undulate; blades weakly oblique; petioles 16–31 cm long; largest capsule-wing straight. Mexico. [Fig. 26.16] . . . . ***B. pudica***
36. Margin evenly curved; blades strongly oblique; petioles 4–12 cm long; largest capsule-wing cucullate. Philippines. [Fig. 23.10] . . . . ***B. anisoptera***
35. Petioles maximally 4–5 cm long.
37. Capsule sparsely pilose; largest wing divaricate. Central America: Panama. [Fig. 26.17] . . . . ***B. carletonii***
37. Capsule glabrous; largest wing deflexed. China: Kweichow. [Fig. 26.13] . . . ?***B. porteri***
1. Axis of inflorescence dichotomous at base.
38. Petioles glabrous or glabrescent.
39. Peduncles shorter than the petioles.
40. Pistillate tepals 5; anther-connective acute; blades obscurely duplicate-serrate. Malaya.

41. Placentas simple. [Fig. 24.8] .... ***B. pavonina***

41. Placentas divided into several plates. Malaya.

42. Placentas with more than 2 plates. [Fig. 24.3] .... ***B. venusta***

42. Placentas with only 2 plates. [Fig. S27] .... ***B. robinsonii***

40. Pistillate tepals less than 5.

43. Petioles 2–4 cm long; pistillate tepals 2; blades entire. Philippines. [Fig. 25.6] .... ?***B. colorata***

43. Petioles 6–30 cm long.

44. Blades coarsely undulate-dentate; outer tepals puberulent; pistillate tepals 3. Central America: Guatemala. [Fig. 9.24] .... ***B. confusa***

44. Blades evenly rounded, not at all undulate. China.

45. Pistillate tepals 4; blades broadly ovate, acuminate, deeply cordate. Yunnan. [Fig. 23.2] .... ***B. prostrata***

45. Pistillate tepals 3. Kiangsi.

46. Blades suborbicular, apiculate, deeply cordate. [Fig. 26.18] .... ***B. lanternaria***

46. Blades triangular-ovate, shallowly cordate. [Fig. 24.4] .... ***B. ornithophylla***

39. Peduncles from about equaling to much exceeding the petioles.

47. Petioles maximally 1.5–6 cm long.

48. Internodes very short and thick, covered by the imbricate stipules; blades suborbicular, acuminate, slightly sinuate; capsule-wings very unequal. Philippines. [Fig. 26.19] .... ***B. copelandii***

48. Internodes long and slender, much exceeding the stipules; capsule-wings slightly unequal.

49. Blades subtruncate or very broadly rounded at base; margin duplicate-serrate. West Indies: St. Vincent. [Fig. 26.20] .... ***B. vincentina***

49. Blades distinctly cordate at base.

50. Blades sublobate with broad triangular projections; stipules persistent. Philippines. [Fig. 26.7] .... ***B. serpens***

50. Blades undulate-margined or evenly rounded; stipules deciduous.

51. Blades broadly subacute, less than twice as long as wide; stem repent. India. [Fig. S28] .... ***B. anaimalaiensis***

51. Blades acuminate, more than twice as long as wide; stem scandent or pendent. Lesser Antilles: St. Vincent. [Fig. S29] .... ***B. pensilis***

47. Petioles maximally 10–30 cm long.

52. Internodes much longer than wide.

53. Inflorescence 3–4 times dichotomous, many-flowered.

54. Blades subrhombic, angled, much less than twice as wide as long. Brazil: Ceará to Santa Catarina. [Fig. 26.21] .... ***B. convolvulacea***

54. Blades ovate to oblong-elliptic, not angled, nearly or quite twice as long as wide. Philippines. [Fig. 25.15] .... ***B. caudata***

53. Inflorescence once or twice dichotomous.

55. Blades angled or with caudate projections; basal sinus shallow. Mexico. [Fig. 25.17] ... . ***B. ludicra***

55. Blades evenly rounded but slightly undulate; basal sinus deep.

56. Rhizome stout; blades suborbicular. New Guinea. [Fig. 26.2] ...... ***B. subcyclophylla***

56. Rhizome slender; blades ovate. (*B. purpurea* Elmer, non Swartz.) Philippines. [Fig. 26.1] .... ***B. neopurpurea***

52. Internodes much wider than long.
 57. Capsule-wings equal or subequal.
  58. Margin glabrous. Philippines. [Fig. 26.22] .... ***B. acuminatissima***
  58. Margin long-ciliate. China: Yunnan. [Fig. 23.5] .... ***B. duclouxii***
 57. Capsule-wings very unequal.
  59. Blades suborbicular.
   60. Margins entire. Philippines. [Fig. 22.15] .... ***?B. rubrifolia***
   60. Margins duplicate-serrate. Siam. [Fig. 8.3] .... ***?B. grata***
  59. Blade narrower, ovate or elliptic.
   61. Blades triangular-ovate, slightly oblique, shallowly cordate; largest capsule-wing subovate with a truncate upper margin. (*B. monticola* Ridley, non C. DC.) Malaya. [Fig. 8.14] .... ***?B. alpina***
   61. Blades elliptic, strongly oblique, deeply cordate; largest capsule-wing rounded above. Philippines.
    62. Peduncles ~10 cm long. [Fig. 24.10] .... ***B. fenicis***
    62. Peduncles to 40 cm long. [Fig. 22.39] .... ***?B. alvarezii***
38. Petioles strongly and persistently vestite.
 63. Margins entire or subentire, not undulate.
  64. Petioles maximally 6 cm long; blades broadly subacute. Philippines.
   65. Largest capsule-wing dolabriform; blades shallowly cordate. [Fig. 25.20] .... ***?B. castilloi***
   65. Largest capsule-wing lunate; blades deeply cordate. [Fig. 9.23] .... ***B. trichochila***
  64. Petioles maximally 8–30 cm long.
   66. Blades twice as wide as long, acuminate; staminate tepals narrow; placentas simple. Brazil: Rio de Janeiro. [Fig. 24.28] .... ***B. magdalenensis***
   66. Blades broader, distinctly less than twice as long as wide.
    67. Pistillate tepals 5.
     68. Internodes long, slender.
      69. Blades concolorous on each side, paler beneath; capsule-wings 6. Philippines. [Fig. 26.23] .... ***?B. suborbiculata***
      69. Blades dark-banded along the larger nerves; capsule-wings 3. China: Yunnan. [Fig. 25.23] .... ***?B. versicolor***
     68. Internodes shorter than thick.
      70. Peduncles much shorter than the petioles; blades narrowly acute, reticulate beneath; bracts large, persistent. Indochina. [Fig. 23.13] .... ***B. balansana***
      70. Peduncles much exceeding the petioles; blades broadly rounded. Brazil: Rio de Janeiro. [Fig. 24.24] .... ***B. fluminensis***
    67. Pistillate tepals less than 5.
     71. Blades suborbicular, apiculate.
      72. Margin ciliate; inflorescence 3–4 times dichotomous. New Guinea. [Fig. 23.25] .... ***B. sharpeana***
      72. Margin glabrous; inflorescence twice dichotomous. Philippines. [Fig. 26.23] .... ***?B. suborbiculata***
     71. Blades narrower, acute or acuminate.
      73. Petioles maximally 10–12 cm long; pistillate tepals 3; blades minutely ciliate. Asia.
       74. Placentas simple; outer staminate tepals red, the inner white. Indochina. [Fig. 24.23] .... ***B. bonii***

74. Placentas bilamellate; staminate tepals all rose. (*B. crispula* Yü ex Irmscher, non Brade.) China: Yunnan .... ***B. cirrosa***

73. Petioles maximally 20–30 cm long. Philippines. [Fig. 24.26] .... ***B. longiscapa***

63. Margins distinctly cut.

75. Peduncles about equaling to shorter than the petioles.

76. Internodes long and slender.

77. Petioles maximally 18 cm long; capsule-wings subequal. Philippines. [Fig. 26.24] .... ***B. longinoda***

77. Petioles maximally 7 cm long; pistillate tepals 5.

78. Blades twice as long as wide; petioles vestite mainly at apex. Africa: Congo .... ***B. bequaertii***

78. Blades less than twice as long as wide; petioles generally vestite. China: Yunnan .... ***B. obsolescens***

76. Internodes very short and stout.

79. Margins undulate and obscurely dentate or angled.

80. Blade twice as long as wide, acuminate, setose above; petiole indument of fimbriate scales. Brazil: Rio de Janeiro. [Fig. 24.28] .... ***B. magdalenensis***

80. Blade almost as wide as long. Java. [Fig. 2.37] .... ***B. mollis***

79. Margins finely cut.

81. Blades bicolorous with a broad, dark cross in the center, bullate. China . ****B. masoniana***

81. Blades concolorous, even.

82. Placentas parietal; ovary 1-celled. China: Kweichow. [Fig. 26.13] .... ?***B. porteri***

82. Placentas central; ovary 2-celled. Philippines. [Fig. 26.25] .... ***B. luzonensis***

75. Peduncles distinctly exceeding the petioles.

83. Blades very shallowly cordate. Philippines.

84. Blades obovate, slightly oblique, undulate. [Fig. 24.40] .... ***B. isabelensis***

84. Blades elliptic, strongly oblique, duplicate-dentate. [Fig. 25.20] .... ?***B. castilloi***

83. Blades deeply cordate, sometimes with overlapping basal lobes.

85. Margins undulate-dentate or undulate-sublobate, otherwise entire or subentire.

86. Blades suborbicular, apiculate; inflorescence 4–5 times dichotomous; capsule-wings very unequal. New Guinea. [Fig. 23.25] .... ***B. sharpeana***

86. Blades narrower; inflorescence 1–4 times dichotomous; capsule-wings equal or subequal. Philippines.

87. Margins undulate-sublobate with subtriangular, rounded projections; inflorescence once dichotomous. [Fig. 26.26] .... ***B. obtusifolia***

87. Margins merely undulate; inflorescence 3–4 times dichotomous.

88. Internodes long and slender. [Fig. 25.21] .... ?***B. pinamalayensis***

88. Internodes very short and stout, covered by the stipules. [Fig. 26.27]. ***B. mindorensis***

85. Margins closely cut.

89. Largest capsule-wing rounded above.

90. Blades glabrous above, reniform, slightly asymmetric, evenly rounded and only rarely with a projection from the longest nerve. Malaya. [Fig. 7.11] .... ***B. nurii***

90. Blades vestite above.

91. Inflorescences 4 times dichotomous; blades broadly ovate to suborbicular, rather finely and regularly cut; placentas simple. Brazil.

92. Bracts persistent, lance-ovate, 1.8–2.5 mm long. Bahía. [Fig. 9.5] .... ***B. subacida***

92. Bracts deciduous, minute. Espírito Santo. [Fig. 24.37] . . . . ***B. itaguassuensis***
91. Inflorescences once or twice dichotomous; blades duplicate-serrate.
93. Blades ovate, even. China: Yunnan. [Fig. 26.28] . . . . ***B. gagnepainiana***
93. Blades elliptic, bullate. Venezuela. [Fig. 26.29] . . . . ***B. humillima***
89. Largest capsule-wing truncate above.
94. Blades glabrous above.
95. Margin crenate-dentate; peduncles glabrous. West Indies: Haiti. [Fig. 23.11] . . . . ***B. repens***
95. Margin duplicate-dentate; peduncles puberulous. Brazil: Bahía. [Fig. 24.34] . . . . ***B. saxifraga***
94. Blades vestite above.
96. Placentas parietal; ovary one-celled. China.
97. Inflorescence few-flowered; tepals glabrous. Kweichow. [Fig. 26.13] . . . ?***B. porteri***
97. Inflorescence many-flowered; tepals crisp-pilose. (*B. crispula* Yü ex Irmscher, non Brade.) Yunnan . . . . ***B. cirrosa***
96. Placentas central; ovary 2–3-celled.
98. Ovary 3-celled; placentas simple; blades evenly rounded. China: Kiangsi. [Fig. 24.32] . . . . ***B. filiformis***
98. Ovary 2-celled.
99. Blades concolorous. Philippines. [Fig. 26.25] . . . . ***B. luzonensis***
99. Blades bicolorous.
100. Blades ovate with narrowly triangular upper half, pale-banded along the principal nerves. Philippines. [Fig. 24.39] . . . . ***B. vanoverberghii***
100. Blades broadly ovate or elliptic, abruptly acuminate along the principal nerves. China: Yunnan. [Fig. 25.23] . . . . ?***B. versicolor***

Subkey 27

1. Blades subtriangular above with nearly straight sides, ovate or rarely rhombic.
2. Inflorescence (or at least the pistillate) unbranched, one-flowered or fasciculate, axillary.
3. Petioles persistently vestite.
4. Staminate tepals 2.
5. Margin entire; petioles and blades stellate-lepidote. Africa: Congo. [Fig. 27.1] . . . . ***B. haullevilleana***
5. Margin sublobate with sharp points and rounded sinuses; petioles pilose. Philippines. [Fig. 6.2] . . . . ***B. quercifolia***
4. Staminate tepals 4; petioles puberulent or pilose.
6. Capsule fusiform, unequally trialate; stipules inconspicuous. Mexico. [Fig. 27.2] . . . . ***B. cylindrata***
6. Capsule turbinate, equally 3-horned; stipules large, conspicuous. Colombia. [Fig. 27.3] . . . . ***B. trianae***
3. Petioles glabrous or glabrescent.
7. Blades all or nearly all less than twice as long as the petioles.
8. Capsule-wings all very narrowly marginiform. Central America: Honduras. [Fig. 25.4] . . . . ***B. yunckeri***

8. Capsule-wings unequal, triangular.
  9. Ovary 2-celled. Malaya. [Fig. 27.4] . . . . ***B. variabilis***
  9. Ovary 3-celled.
    10. Staminate tepals very unequal, the outer suborbicular, the inner narrowly oblanceolate, obtuse, much smaller. Central America: Salvador, Guatemala. [Fig. 27.5] . . . . ***B. cebadillensis***
    10. Staminate tepals subequal, the outer elliptic, the inner obovate, retuse. Colombia. [Fig. 27.6] . . . . ***B. ophiogyna***
7. Blades all more than twice as long as the petioles.
  11. Margin entire or inconspicuously cut.
    12. Blades 3–5 times as long as wide, entire or serrate near apex. India. [Fig. 21.11] . . . . ***B. goniotis***
    12. Blades less than 3 times as long as wide, denticulate. Philippines. [Fig. 27.7] . . ***B. bolsteri***
  11. Margin conspicuously cut, mostly duplicate-dentate.
    13. Blades 3–5 times as long as wide.
      14. Blades strongly bicolorous, dark above, pale below. Philippines. [Fig. 27.8] . ***B. merrittii***
      14. Blades nearly concolorous.
        15. Stem simple or few-branched, tuberous at base. Bolivia, Argentina. [Fig. 21.15] . . . . ***B. boliviensis***
        15. Stem much branched.
          16. Blade 1 cm wide, firm. Mexico. [Fig. 27.9] . . . . ***B. cuernavacensis***
          16. Blade to 5 cm wide, very thin. China: Taiwan. [Fig. 20.39] . . . . ***B. taiwaniana***
    13. Blades less than 3 times as long as wide.
      17. Blades bicolorous above with large white spots. Borneo. [Fig. S30] . . . . . . ***B. borneensis***
      17. Blades concolorous above.
        18. Staminate tepals 2. Cult. Madagascar. [Fig. 27.36] . . . . ?***B. humilis***
        18. Staminate tepals 4.
          19. Ovary ellipsoid, unequally 3-alate.
            20. Stipules deciduous. Colombia. [Fig. 27.10] . . . . ***B. subcostata***
            20. Stipules persistent. Mexico. [Fig. S31] . . . . ***B. dealbata***
          19. Ovary turbinate, equally 3-horned. Colombia. [Fig. 21.29] . . . . ***B. toledana***
2. Inflorescence (at least the staminate) branched.
  21. Primary bracts non-foliaceous.
    22. Petioles strongly vestite. Philippines.
      23. Bracts persistent; staminate tepals 4. [Fig. 19.15] . . . . ***B. affinis***
      23. Bracts deciduous; staminate tepals 2. [Fig. 27.11] . . . . ***B. cumingii***
    22. Petioles glabrous or glabrescent.
      24. Capsule-wings unequal. New Guinea. [Fig. 21.17] . . . . ***B. simulans***
      24. Capsule-wings equal or nearly so. Philippines.
        25. Inflorescence dense, 4 cm long or less. [Fig. 27.12] . . . . ***B. ramosii***
        25. Inflorescence lax, 6–7 cm long.
          26. Blades glabrous. [Fig. 20.17] . . . . ***B. oblongata***
          26. Blades densely brown-strigose on the nerves beneath. [Fig. 21.46] . . . . ***B. rizalensis***
  21. Primary bracts (at least the basal) foliaceous.
    27. Blade 3–6 times as long as wide.
      28. Margin entire or minutely and obscurely cut; stipules persistent.

29. Blade rounded at base; stem simple; staminate tepals 2. Bolivia. [Fig. 27.13] . . . . ***B. oblanceolata***
29. Blade shallowly cordate at base; stem branched. Burma. [Fig. 21.11] . . . . ***B. goniotis***
28. Margin coarsely cut; staminate tepals 4.
30. Stipules ovate, aristate at apex. Indochina. [Fig. 20.49] . . . . ***B. boisiana***
30. Stipules subulate. China: Taiwan. [Fig. 20.39] . . . . ***B. taiwaniana***
27. Blade less than 3 times as long as wide.
31. Petioles prominently vestite, at least at apex; staminate tepals 4.
32. Hairs massed at apex of petiole. Africa: Angola. [Fig. 27.14] . . . . ***B. rostrata***
32. Hairs spread along petiole.
33. Outer tepals broadly rounded; petioles 10–18 mm long. Indonesia? [Fig. 19.24] . . . . . . ***B. rubro-setulosa***
33. Outer tepals acute, serrulate; petioles to 45 mm long. Mexico. [Fig. 27.15] . . . . ***B. michoacana***
31. Petioles glabrous or glabrescent.
34. Inflorescence (including pedicels) racemose. (Possibly a synonym of *B. gracilis*.) Mexico. [Fig. 27.16] . . . . ****B. bulbillifera***
34. Inflorescence (including pedicels) paniculate.
35. Pedicels articulate with the apex of the branch, the branch appearing one-flowered in fruit after the loss of the staminate flowers. China: Yunnan. [Fig. 12.4] . ***B. yunnanensis***
35. Pedicels articulate on an extended axis.
36. Branches (at least the lower) dichotomous.
37. Outer tepals glabrous. (Possibly a synonym of *B. rubella*.) Burma. [Fig. 27.17] . . . . . . ***B. modestiflora***
37. Outer tepals setose. India . . . . ***B. lushaiensis***
36. Branches racemose.
38. Staminate tepals 2; capsule-wings equal, crescent-shaped. Philippines. [Fig. 27.7] . . . . ***B. bolsteri***
38. Staminate tepals 4.
39. Blades only slightly oblique; capsule-wings narrowly triangular, spreading. India. [Fig. 2.23] . . . . ***B. rubella***
39. Blades transverse to the petiole. Borneo: Sarawak. [Fig. 27.18] . . . . ***B. beryllae***
1. Blades rounded above, usually apiculate or acuminate, usually elliptic or oblong, rarely ovate.
40. Inflorescence (at least the pistillate) unbranched below the pedicels, one-flowered or fasciculate.
41. Petioles glabrous or glabrescent.
42. Blades less than twice as long as the petioles.
43. Staminate tepals 2; blades shallowly cordate. New Guinea.
44. Inflorescence terminal only, to 12 cm long. [Fig. 21.44] . . . . ***B. media***
44. Inflorescence terminal and axillary, ~3 cm long. [Fig. 27.19] . . . . ***B. pediophylla***
43. Staminate tepals 4.
45. Blades setose on the nerves. Central America: Guatemala . . . . ***B. setulosa***
45. Blades completely glabrous.
46. Stem and internodes very short; stipules imbricate. Indochina. [Fig. 26.3] . . ***B. lecomtei***
46. Stem and internodes elongate.
47. Inner staminate tepals obcordate, retuse; stamens apiculate; capsule-wings triangular. Colombia. [Fig. 27.6] . . . . ***B. ophiogyna***

47. Inner staminate tepals elliptic-oblong, rounded; stamens truncate, capsule-wings narrow, oblong. Malaya. [Fig. 27.20] . . . . ***B. isopteroidea***

42. Blades more than twice as long as the petioles.

48. Base of blade rounded or truncate.

49. Blades hirtellous on the nerves beneath; staminate tepals 2. New Guinea. [Fig. 27.21] . . . . ?***B. sogerensis***

49. Blades soon wholly glabrous.

50. Ovary one-celled; placentas parietal; styles simple; peduncle and bracts partly stellate-pubescent. Tropical West Africa . . . . ?***B. cataractarum***

50. Ovary 3-celled.

51. Margin dentate or subdentate-lobed. Philippines. [Fig. 27.22] . . . . ***B. subtruncata***

51. Margin remotely denticulate. Indonesia: Lingga Archipelago. [Fig. 27.23]. ***B. axillaris***

48. Base of blade more or less cordate.

52. Blades broadly sublobate at base; bracts large. Indonesia: Celebes. [Fig. 25.5] . . . . ***B. sarasinorum***

52. Blades evenly rounded at base.

53. Staminate tepals 4.

54. Blades deeply cordate with overlapping lobes; anthers apiculate. Indonesia: Celebes. [Fig. 27.24] . . . . ***B. cristata***

54. Blades cordate without overlapping basal lobes.

55. Capsule trisulcate, unappendated; staminate tepals subequal; anthers obtuse; blades shallowly cordate. Java. [Fig. 27.25] . . . . ***B. trisulcata***

55. Capsule non-sulcate, appendaged.

56. Staminate tepals subequal; anthers ovoid, subtruncate; capsule equally 3-horned. Central America: Guatemala, Costa Rica, and Panama. [Fig. 20.50] . . . . . ***B. heydei***

56. Staminate tepals very unequal; anthers oblong; the exserted connective longer than the anther; capsule unequally trialate. Colombia. [Fig. 16.11] . . . . ***B. extensa***

53. Staminate tepals 2; inflorescence unisexual.

57. Blades with large white spots above. New Guinea. [Fig. 21.18] . . . . . . ***B. spilotophylla***

57. Blades concolorous above; capsule-wings truncate.

58. Margins entire to remotely denticulate; pistillate flowers solitary.

59. Capsule-wings crescentiform; pedicels shorter than the petioles. Tropical West Africa. [Fig. 27.26] . . . . ***B. macrocarpa***

59. Capsule-wings ovate, ascending; pedicels much longer than the petioles. Borneo. [Fig. S32] . . . . ***B. murudensis***

58. Margins closely dentate or denticulate.

60. Staminate inflorescence few-flowered; tepals 20 mm long. New Guinea. [Fig. 21.27] . . . . ***B. vanderwateri***

60. Staminate inflorescence many-flowered. Indonesia: Solomons.
(1896). [Fig. 20.29] . . . . ***B. weigallii***
(1943). [Fig. 27.27] . . . . ***B. salomonensis***

41. Petioles strongly vestite at least at apex.

61. Hairs concentrated at the apex of the petiole. Africa.

62. Inner staminate tepals elliptic, about twice as long as wide. Ethiopia. [Fig. 27.28] . . . . ***B. abyssinica***

62. Inner staminate tepals oblanceolate, 3 times as long as wide. Congo.

63. Fruit wingless, indehiscent. [Fig. 12.8] . . . . *B. meyeri-johannis*

63. Fruit unequally 3-alate . . . . *B. bequaertii*

61. Hairs widely distributed on the petiole.

64. Blades broadly rounded at base, rarely retuse.

65. Capsule-wings strongly unequal.

66. Plant shrubby, tall; blades pilose above. New Guinea. [Fig. 21.6] . . . . *B. fruticella*

66. Plant herbaceous, 2–10 cm high; blades glabrous or subglabrous above.

67. Internodes very short; stipules imbricate. Brazil: Rio de Janeiro. [Fig. 25.12] . . . . *B. herteri*

67. Internodes elongate, much exceeding the stipules. Venezuela. [Fig. 27.29] . . . . *B. steyermarkii*

65. Capsule-wings equal or subequal.

68. Capsule-wings oblong, rounded. New Guinea. [Fig. 27.21] . . . . ?*B. sogerensis*

68. Capsule-wings triangular.

69. Capsule-wings ascending acute; blades coarsely dentate toward apex; pistillate tepals connate. New Guinea. [Fig. 27.30] . . . . *Symbegonia pulchra*

69. Capsule-wings truncate, obtuse.

70. Pistillate flowers 2, pedunculate; blades sublobate and dentate. Indonesia: Celebes. [Fig. 14.53] . . . . *B. hispidissima*

70. Pistillate flowers solitary, not pedunculate; blades irregularly repand-denticulate. China: Hainan. [Fig. 21.31] . . . . *B. hainanensis*

64. Blades distinctly cordate at base.

71. Staminate tepals 2.

72. Petioles 5–8 cm long; inflorescence capituliform. Indonesia: Celebes. [Fig. 27.31] . . . . *B. capituliformis*

72. Petioles to 2 cm long.

73. Blades glabrous above. Philippines. (*B. robinsonii* Merrill, non Ridley.) . . . . . *B. perryae*

73. Blades vestite above. New Guinea. [Fig. 27.32] . . . . *Symbegonia papuana*

71. Staminate tepals 4.

74. Basal sinus closed, the lobes overlappping; infloresence sessile. Indonesia: Celebes. [Fig. 27.24] . . . . ?*B. cristata*

74. Basal sinus open; inflorescence pedunculate.

75. Bracts large, resembling stipules, imbricate. Burma. [Fig. 27.33] . . . . *B. dux*

75. Bracts inconspicuous, remote.

76. Blades glabrous above, subentire or serrate. Burma. [Fig. 21.32] . . . . *B. sandalifolia*

76. Blades vestite above, duplicate-serrate.

77. Styles bifid. India. [Fig. 27.34] . . . . *B. pedunculosa*

77. Styles multifid. China: Formosa . . . . *B. bui-montana*

40. Inflorescence (at least the staminate) branched.

78. Petioles strongly vestite.

79. Petiole-trichomes of scales; blade-base rounded or truncate. Tropical West Africa.

80. Margin entire; staminate tepals 2. [Fig. 25.9] . . . . *B. poculifera*

80. Margin duplicate-crenate; staminate tepals 4. [Fig. 27.35] . . . . *B. annobonensis*

79. Petiole-trichomes of simple hairs.

81. Blades vestite above.

82. Stem soft, very slender; plant annual or of less duration, fibrous-rooted; pistillate bracteoles

present; blades coarsely cut; flowers minute; capsule-wings unequal. West Indies to Peru and Brazil. [Fig. 27.36] . . . . *B. humilis*

82. Stem firm, relatively stout; plant mostly more than annual; flowers medium to large.

83. Staminate tepals 2; blades rounded at base, strongly bicolorous. Philippines. [Fig 14.28] . . . . *B. urdanetensis*

83. Staminate tepals 4 or rarely 3; blades cordate at base.

84. Blade serrate. Origin unknown . . . . ?**B. donkelaariana*

84. Blade subentire. Brazil, Paraguay. [Fig. 27.37] . . . . *B. subvillosa*

81. Blades glabrous above.

85. Blade-base strongly cordate. Brazil: São Paulo. [Fig. 27.38] . . . . *B. handroi*

85. Blade-base rounded or truncate. New Guinea.

86. Staminate tepals 4. [Fig. 27.39] . . . . *B. brassii*

86. Staminate tepals 2. [Fig. 27.21] . . . . *B. sogerensis*

78. Petioles glabrous or glabrescent.

87. Staminate tepals 4.

88. Ovary subequally trialate; inflorescence amply paniculate. Borneo. [Fig. 27.40] . . . . *B. tawaênsis*

88. Ovary unappendaged.

89. Ovary 3-celled, turbinate, obscurely 3-lobed; peduncle and bracts glabrous; styles bifid. Sumatra. [Fig. 20.41] . . . . *B. turbinata*

89. Ovary one-celled; peduncle and bracts partly stellate-pubescent. Tropical West Africa . . . . ?*B. cataractarum*

87. Staminate tepals 2; inflorescences, at least the staminate, paniculate.

90. Inflorescences unisexual; blades cordate at base; capsule-wings equal. New Guinea. [Fig. S33] . . . . *B. tafaênsis*

90. Inflorescences bisexual.

91. Pistillate flowers at base of panicle numerous; pistillate bracteoles persistent, large, entire; largest capsule-wing falciform, ascending. Venezuela. [Fig. 27.41] . . . . *B. nubicola*

91. Pistillate flowers at base of panicle few or solitary. Indonesia.

92. Blades deeply and narrowly cordate at base. Borneo: Sarawak. [Fig. 27.42] . . *B. rubida*

92. Blades shallowly cordate or semicordate to rounded at base.

93. Capsule-wings unequal. New Guinea. [Fig. 27.43] . . . . *B. augustae*

93. Capsule-wings equal or subequal.

94. Blade subcordate at base with one lobe much larger than the other. Java. [Fig. 21.22] . . . . *B. isoptera*

94. Blade rounded at base. Borneo: Sarawak . . . . *B. pendula*

Subkey 28

1. Inflorescence (at least the pistillate) without a central axis, one-flowered or fasciculate, axillary.

2. Petioles persistently vestite.

3. Bracts deciduous; pistillate tepals 5 or rarely 6.

4. Blades glabrous above, coarsely dentate. Indonesia: Celebes. [Fig. 28.1] . . . . . *B. sphenocarpa*

4. Blades vestite above.

5. Petiole-trichomes of flat triangular scales. India. [Fig. 28.2] . . . . *B. cathcartii*

5. Petiole-trichomes filamentous.

6. Trichomes concentrated at the apex of the petiole. Africa: Congo (Zaire) . . . ***B. bequaertii***
6. Trichomes widely distributed on the petiole. India. [Fig. 28.3] . . . . ***B. thomsonii***
3. Bracts persistent, conspicuous.
7. Staminate tepals 2.
8. Pistillate tepals 2; inflorescence dense, subglobose. Tropical West Africa. [Fig. 25.1] . . . . ***B. ampla***
8. Pistillate tepals 5; blades coarsely dentate. Indonesia: Celebes.
9. Pistillate tepals setulose. [Fig. 25.14] . . . . ***B. strachwitzii***
9. Pistillate tepals glabrous. [Fig. 28.4] . . . . ***B. celebica***
7. Staminate tepals 4.
10. Blades glabrous above.
11. Stem short; internodes much shorter than the petioles; blades broadly rounded, sublobate. Peru. [Fig. 7.17] . . . . ***B. veitchii***
11. Stem elongate with long internodes; blades acuminate. Borneo. [Fig. 28.5] . ***B. burbidgei***
10. Blades vestite above.
12. Outer staminate tepals villous. China: Yunnan . . . . ***B. morifolia***
12. Outer staminate tepals glabrous or at most ciliate.
13. Blades rounded; bracts fimbriate; peduncles exceeding the petioles. Argentina. [Fig. 28.6] . . . . ***B. tafiënsis***
13. Blades acute or acuminate.
14. Stem simple, very short; inflorescence of 1 or rarely 2 flowers; bracts connate. China: Yunnan . . . . ?***B. parvula***
14. Stem branched.
15. Branches few with internodes to 3 cm long; petioles to 8 cm long; blades pale-striped along the principal veins. Bolivia. [Fig. 28.7] . . . . ***B. weddelliana***
15. Branches many with internodes to 7 cm long; petioles to 15 cm long; blades concolorous. Peru. [Fig. 28.8] . . . . ***B. thyrsoidea***
2. Petioles glabrous or glabrescent.
16. Bracts deciduous.
17. Blades vestite at least on the nerves.
18. Blades entire, red-hairy on the 2 central nerves; plant rhizomatous; capsule-wings rounded. Malaya. [Fig. 12.24] . . . . ?***B. carnosula***
18. Blades serrate or dentate.
19. Capsules equally 3-horned; inflorescences simple, separate, axillary, the staminate few-flowered, fasciculate, the pistillate one-flowered. Colombia. [Fig. 21.13] . . . ***B. umbellata***
19. Capsule unequally trialate; plant tuberous. East Africa.
20. Blades acuminate; tepals yellow. [Fig. 28.9] . . . . ***B. flava***
20. Blades obtuse . . . . ***B. pygmaea***
17. Blades completely glabrous.
21. Inflorescence (pistillate) sessile. Indonesia: Sumatra. [Fig. 28.10] . . . . ***B. atricha***
21. Inflorescence pedunculate.
22. Staminate tepals 4.
23. Capsule wingless. Indonesia: Sumatra. [Fig. 28.11] . . . . ***B. trigonocarpa***
23. Capsule alate; connective produced about twice the length of the anther. Colombia. [Fig. 16.11] . . . . ***B. extensa***
22. Staminate tepals 2.

24. Capsule-wings subequal; blades undulate-serrate. New Guinea. [Fig. 28.12] .... ***B. brachybotrys***

24. Capsule-wings very unequal.

25. Pistillate tepals 2; blades 2–3.2 cm long. Africa: Congo. [Fig. 21.24] ..... ***B. iucunda***

25. Pistillate tepals 5; blades 12–17 cm long. Indonesia: Celebes. [Fig. 28.13] .... ***B. strictipetiolaris***

16. Bracts persistent, conspicuous.

26. Blade-margin entire.

27. Peduncles shorter than the petioles; staminate and pistillate tepals 2. Tropical West Africa: Fernando Po. [Fig. 25.1] .... ***B. ampla***

27. Peduncles longer than the petioles; staminate and pistillate tepals 4. Malaya. [Fig. 12.24] .... ?***B. carnosula***

26. Blade-margins cut; pistillate tepals 5.

28. Peduncles longer than the petioles. Indonesia.

29. Smaller capsule-wings narrowly crescentiform. Java vicinity. [Fig. 28.14] ... ***B. tenuifolia***

29. Smaller capsule-wings subtriangular. Borneo. [Fig. 28.5] .... ***B. burbidgei***

28. Peduncles shorter than petioles.

30. Capsule wingless. Philippines. [Fig. 28.15] .... ***B. pseudolateralis***

30. Capsule alate.

31. Stem internodes over 10 cm long. Indonesia: Celebes. [Fig. 28.16] ...... ***B. koordersii***

31. Stem internodes not over 2 cm long. Brazil.

32. Plant rhizomatous; stem stout; blades to 30 cm long. Santa Catarina. [Fig. 28.17] .... ***B. barkleyana***

32. Plant fibrous-rooted; stem slender; blades 1.5–2.5 cm long. Goiás. [Fig. 28.18] .... ***B. exigua***

1. Inflorescence racemose or paniculate with a central axis.

33. Petioles persistently vestite at least at apex.

34. Primary bracts foliaceous, a continuation and gradual diminution of the stem leaves below.

35. Mature branch peduncles equaling or shorter than the bract petioles.

36. Blades denticulate or crenulate.

37. Mature blades glabrous; stems 1.8–2.4 m high; staminate tepals unequal. Borneo. [Fig. 28.5] .... ***B. burbidgei***

37. Mature blades vestite.

38. Outer staminate tepals entire.

39. Blades and stipules acute; pistillate tepals free. Cultivated. Origin? . ?***B. albido-setulosa***

39. Blades and stipules obtuse to broadly rounded; pistillate tepals high-connate. New Guinea. [Fig. 10.10] .... ***Symbegonia hirta***

38. Outer staminate tepals ciliate-serrulate.

40. Ovary ellipsoid; blades subreniform, apiculate, angled, sinuate; staminate tepals subequal. Mexico. [Fig. 28.19] .... ***B. extranea***

40. Ovary turbinate; blades ovate, acute; staminate tepals unequal. Colombia. [Fig. 27.3] .... ***B. trianae***

36. Blades coarsely serrate to sublobate.

41. Margins sublobate with the larger projections triangular; blades shallowly cordate to rounded at base.

42. Internodes slender, much shorter than the petioles; stipules to 8 mm long, setose-

mucronate. Indonesia: Celebes. [Fig. 25.13] . . . . *B. flacca*

42. Internodes stout, about equaling the petioles; stipules to 16 mm long, fimbriate-dentate. East Africa: Tanganyika. [Fig. 5.33] . . . . *B. tayloriana*

41. Margins coarsely serrate to duplicate-dentate but not sublobate.

43. Plant tuberous. Mexico.

44. Staminate tepals 2. [Fig. 28.20] . . . . *B. fusibulba*

44. Staminate tepals 4. [Fig. 28.21] . . . . *B. sandtii*

43. Plant fibrous-rooted.

45. Capsule-wings equal, making the capsule ovate in outline. (*B. franconis.*) Mexico. [Fig. 28.22] . . . . *B. wallichiana*

45. Capsule-wings unequal.

46. Stipules brown; fruit ovoid. Tropical West Africa. [Fig. 27.14] . . . . *B. rostrata*

46. Stipules scarious; fruit turbinate. China: Yunnan . . . . *B. alveolata*

35. Mature branch-peduncles exceeding the bract-petioles.

47. Margins sublobate with large triangular or semiorbicular projections.

48. Staminate tepals 2, orbicular. Indonesia: Celebes. [Fig. 25.13] . . . . *B. flacca*

48. Staminate tepals 4. Mexico.

49. Petioles vestite only in a ring at apex. [Fig. 28.23] . . . . *B. boissieri*

49. Petioles vestite generally.

50. Outer staminate tepals suborbicular, entire. [Fig. 28.24] . . . . *B. palmeri*

50. Outer staminate tepals ovate, attenuate, serrulate. [Fig. 5.31] . . . . *B. fernaldiana*

47. Margins duplicate-dentate to subentire, but not sublobate.

51. Stem soft, very slender; plant annual or of less duration, fibrous-rooted; blades coarsely cut; flowers minute.

52. Blades suborbicular or very broadly ovate, about as broad as long. India. [Fig. 26.8] . . . . *B. wengeri*

52. Blades distinctly longer than wide; pistillate brachteoles present.

53. Blades crenate, mostly rounded and without a distinct apex. Brazil: Minas Gerais, Goiás. [Fig. 28.25] . . . . *B. alchemilloides*

53. Blades dentate or serrate, always with a distinct apex.

54. Petioles and upper stem villous; capsule-wings slightly unequal. West Indies to Peru and Brazil. [Fig. 28.26] . . . . *B. hirtella*

54. Petioles sparsely pubescent to glabrous; stem glabrous; capsule-wings strongly unequal. West Indies to Peru and Brazil. [Fig. 27.36] . . . . *B. humilis*

51. Stem firm; relatively stout; plant mostly more than annual; flowers medium to large.

55. Ovary much broader than long, turbinate, its appendages equal. Colombia. [Fig. 27.3] . . . . *B. trianae*

55. Ovary at least as long as broad.

56. Pistillate bracteoles lacking or very early deciduous.

57. Tepals serrate, papillate. Mexico. [Fig. 28.27] . . . . *B. hintoniana*

57. Tepals entire, even.

58. Ovary 2-celled; plant fibrous-rooted. India. [28.28] . . . . *B. wattii*

58. Ovary 3-celled; plant tuberous

59. Stem simple, more or less pubescent. Mexico, Guatemala. [Fig. 28.29] . . *B. gracilis*

59. Stem branched, glandular. Mexico. [Fig. 28.30] . . . . *B. cavum*

56. Pistillate bracteoles present, persistent.

60. Blades duplicate-dentate or -serrate.

61. Stem branching from the base, hirsute. Brazil. [Fig. 28.31] .... ***B. schmidtiana***

61. Stem simple, glabrous. Cuba. [Fig. 12.16] .... ***B. cubensis***

60. Blades uniformly cut to subentire.

62. Blades mostly subentire, evenly and rather densely vestite beneath. Brazil, Paraguay. [Fig. 27.37] .... ***B. subvillosa***

62. Blades strongly and regularly cut.

63. Plants low, less than 0.5 m high; stem simple; pistillate bracteoles fimbriate; seeds attenuate at apex. Mexico and Cuba to Bolivia and Brazil. [Fig. 11.2] . . ***B. fischeri***

63. Plants ~2 m high. Borneo. [Fig. 28.5] .... ***B. burbidgei***

34. Primary bracts non-foliaceous, reduced abruptly from the stem leaves.

64. Primary bracts persistent, conspicuous.

65. Margin coarsely double-dentate or sublobate.

66. Blades pubescent above.

67. Blades broadly rounded. Peru, Bolivia. [Fig. 28.32] .... ***B. clarkei***

67. Blades acuminate. Philippines .... ?***B. mearnsii***

66. Blades glabrous or subglabrous above.

68. Staminate tepals 4. Argentina. [Fig. 28.33] .... ***B. micranthera***

68. Staminate tepals 2.

69. Blades ovate, broadest below the middle. Indonesia: Celebes. [Fig. 28.4] . . ***B. celebica***

69. Blades oblong-obovate to obovate, broadest above the middle. Philippines. [Fig. 21.34] .... ***B. casiguranensis***

65. Margin finely and almost regularly cut to entire.

70. Blades pubescent above.

71. Staminate tepals acute, the outer serrate. Peru, Bolivia. [Fig. 8.39] .... ***B. herrerae***

71. Staminate tepals rounded, entire; anthers obovoid.

72. Pistillate flowers basal; lower staminate branches deciduous. Borneo. [Fig. 26.15] .... ***B. adenodes***

72. Pistillate flowers non-basal; branches all persistent. India. [Fig. 28.34] . . ***B. integrifolia***

70. Blades glabrous or subglabrous above.

73. Ovary-wings equal or subequal, much higher than wide; blades much longer than broad, acuminate.

74. Ovary-wings oblong, equally wide throughout. Malaya. [Fig. 28.35] ..... ***B. holttumii***

74. Ovary-wings narrowly subtriangular, broadset at top. Borneo. [Fig. 28.5] .... ***B. burbidgei***

73. Ovary-wings distinctly unequal; margins mostly entire or subentire; ovary 2-celled.

75. Stipules glabrous, deciduous. Malaya. [Fig. 12.18] .... ?***B. guttata***

75. Stipules pilose.

76. Petioles 0–2.5 cm long. Burma. [Fig. 28.36] .... ***B. paleacea***

76. Petioles 5–8 cm long. Malaya. [Fig. 28.37] .... ?***B. leucantha***

64. Primary bracts deciduous.

77. Stem long, the slender internodes as long as or longer than the petioles.

78. Blades sinuate-angled, pilose; outer tepals ciliate-serrate. Mexico. [Fig. 28.38] .... ***B. nemoralis***

78. Blades evenly rounded.

79. Ovary fusiform; wings unequal, truncate, triangular; petioles vestite mainly at apex.

Africa: Congo. [Fig. 28.39] . . . . ?***B. wollastonii***
79. Ovary broadly turbinate, equally 3-horned; petioles evenly vestite. Colombia. [Fig. 21.13] . . . . ***B. umbellata***
77. Stem short, the internodes shorter than the petioles.
80. Staminate tepals 2; pistillate tepals 3; blades coarsely double-dentate to sublobate. Mexico. [Fig. 2.3] . . . . ***B. polygonata***
80. Staminate tepals 4.
81. Pistillate tepals 4; blades obtuse. Indonesia: Sumatra. [Fig. 23.9] . . . . ***B. ionophylla***
81. Pistillate tepals 5; blades acute or acuminate.
82. Ovary 3-celled; inflorescence many-flowered; branches secund. Guyana. [Fig. 28.40] . . . . ***B. jenmanii***
82. Ovary 2-celled; inflorescence few-flowered.
83. Blades ovate, acuminate, subentire. Java. [Fig. 28.41] . . . . ***B. zollingerana***
83. Blades suborbicular, acute, sublobate. Burma. [Fig. 11.4] . . . . ***B. martabanica***
33. Petioles glabrous or glabrescent.
84. Primary bracts (at least the basal ones) foliaceous, a continuation and gradual diminution of the stem-leaves below; inflorescence terminal.
85. Branch peduncles shorter than the petioles to about equaling them.
86. Staminate tepals 2; pistillate tepals 2. Tropical West Africa.
87. Blade entire or obscurely dentate, broadly elliptic to suborbicular. [Fig. 25.1] . . . . ***B. ampla***
87. Blade distinctly crenulate, broadly obovate. Cameroon . . . . ***B. cameroonensis***
86. Staminate tepals 4.
88. Blades acuminate, sharply duplicate-serrate. Central America: El Salvador. [Fig. 28.42] . . . . ***B. weberlingii***
88. Blades broadly acute, triangular-sublobate and laxly and minutely denticulate. Mexico. [Fig. 28.43] . . . . ***B. relicta***
85. Branch peduncles distinctly exceeding the petioles.
89. Staminate tepals 2.
90. Blades glabrous; stem firm; placentas simple. South Africa. [Fig. 28.44] . . . . ***B. dregei***
90. Blades pubescent; stem soft; placentas partly bilamellate. Venezuela. [Fig. 28.45] . . . . ***B. prieurii***
89. Staminate tepals 4.
91. Stipules entire or quickly deciduous and unknown.
92. Blades sublobate or duplicate-dentate.
93. Blades ovate, attenuate.
94. Tepals yellow; ovary 3-celled. Bolivia. [Fig. 28.46] . . . . ***B. pearcei***
94. Tepals rose and white; ovary 2-celled. Java. [Fig. S34] . . . . ***B. rupicola***
93. Blades broadly elliptic or subrhombic, acute; floral bracts large, membranous.
95. Anthers linear; capsule-wings subequal, very narrow. Brazil: Rio de Janeiro. [Fig. 28.47] . . . . ***B. lanstyakii***
95. Anthers obovate; capsule-wings very unequal, the largest ovate, 2 cm wide. Mexico. [Fig. 12.20] . . . . ***B. rhodochlamys***
92. Blades more finely and regularly cut.
96. Margin laxly undulate-dentate. Near Java. [Fig. 28.14] . . . . ?***B. tenuifolia***
96. Margin closely crenate-serrate. Colombia. [Fig. 27.6] . . . . ***B. ophiogyna***

91. Stipules serrate to fimbriate.

97. Blades partially vestite.

98. Blades ovate, acuminate, the apex much larger than the other extensions of the margin; tepals yellow. Africa: general. [Fig. 28.48] .... ***B. sutherlandii***

98. Blades broadly elliptic to suborbicular, the apex not pronounced.

99. Margin laciniate. Mexico. [Fig. 5.30]. .... ***B. portillana***

99. Margin crenate-serrate; seeds attenuate. Mexico and the West Indies to Bolivia and Brazil. [Fig. 11.2] .... ***B. fischeri***

97. Blades completely glabrous.

100. Outer staminate tepals acute, serrulate; blades dimorphic, the lower suborbicular, the upper ovate, attenuate. (var. *diversifolia*.) Mexico. [Fig. 28 29] .... ***B. gracilis***

100. Outer staminate tepals broadly rounded, entire; blades nearly uniform.

101. Plant tuberous. Africa: general. [Fig. 28.49] .... ***B. princeae***

101. Plant fibrous-rooted.

102. Blades rounded or subtruncate at base; bracts of the branches dentate; seeds ellipsoid. West Indies: St. Vincent. [Fig. 26.20] .... ***B. vincentina***

102. Blades cordate at base; bracts of the branches fimbriate; seeds slender, attenuate. Mexico and the West Indies to Bolivia and Brazil. [Fig. 11.2] .... ***B. fischeri***

84. Primary bracts non-foliaceous, abruptly reduced from the nearest stem-leaves.

103. Primary bracts persistent, conspicuous.

104. Staminate tepals 2. New Guinea.

105. Bracts imbricate; inflorescence dense; staminate and pistillate flowers on the same branch. [Fig. 22.12] .... ***B. rieckei***

105. Bracts lax.

106. Pistillate flowers basal. Borneo. [Fig. 28.50] .... ***B. walterana***

106. Pistillate flowers in separate inflorescences, only the staminate known. New Guinea. [Fig. 28.51] .... ***B. novoguineensis***

104. Staminate tepals 4.

107. Margin entire or subentire or undulate. Siam.

108. Blades regularly ciliate; largest capsule-wing not more than twice as long as high; obtuse. [Fig. 28.52] .... ***B. curtisii***

108. Blades marginally glabrous or subglabrous; largest capsule-wing more than twice as wide as high, attenuate. [Fig. 28.53] .... ***B. haniffii***

107. Margin variously cut.

109. Capsule-wings equal or subequal.

110. Stem elongate; internodes longer than the petioles; inflorescence amply paniculate. Borneo. [Fig. 27.40] .... ***B. tawaënsis***

110. Stem short; internodes shorter than the petioles.

111. Blades concolorous; placentas bifid. Malaya. [Fig. 28.54] ...... ***B. phoeniogramma***

111. Blades dark-banded along the principal nerves; placentas simple. East Africa: Tanganyika. [Fig. 28.55] .... ***B. riparia***

109. Capsule-wings strongly unequal.

112. Blades duplicate-serrate to sublobate. Brazil: Goiás. [Fig. 28.18]......... ***B. exigua***

112. Blades slightly cut.

113. Capsule-wing single, narrowly triangular; blade rounded and without a distinct apex but one nerve longer than the others. Mexico. [Fig. 28.56] .... ***B. balmisiana***

113. Capsule-wings 3.
114. Pistillate flowers basal. Borneo. [Fig. 28.5] . . . . **B. burbidgei**
114. Pistillate flowers non-basal. India.
115. Blades acuminate; upper internodes longer than the petioles. [Fig. 2.23] . . . . **B. rubella**
115. Blades broadly acute or apiculate; internodes all shorter than the petioles.
116. Plant tuberous; largest capsule-wing wider than high. [Fig. 12.5] . **B. brevicaulis**
116. Plant fibrous-rooted; largest capsule-wing higher than wide. [Fig. 26.8] . . . . **B. wengeri**
103. Primary bracts inconspicuous, deciduous.
117. Staminate tepals 2.
118. Capsule-wings unequal; blades sublobate, irregularly dentate. Mexico. [Fig. 28.57] . . . . **B. huberti**
118. Capsule-wings equal or subequal; blades obscurely cut to entire.
119. Mature blades broadly rounded or obtuse. New Guinea. [Fig. 21.19] . . **B. subelliptica**
119. Mature blades acuminate.
120. Blades almost twice as long as wide, completely glabrous. Sangir Islands. [Fig. 21.25] . . . . **B. insularum**
120. Blades much less than twice as long as wide.
121. Petiole and blade completely glabrous. Bismarck Archipelago. [Fig. 25.7] . . . . **B. peekelii**
121. Petiole and blade sparsely vestite. New Guinea. [Fig. 28.58] . . . . **B. brevirimosa**
117. Staminate tepals 4.
122. Blades truncate at base or shallowly cordate or semicordate.
123. Blades semicordate with one side of base cuneate, the other lobed; capsule-wings equal, truncate. Indonesia: Sumatra. [Fig. 28.10] . . . . **B. atricha**
123. Blades equally truncate or shallow-cordate on both sides.
124. Blades ovate-triangular, slightly oblique. Burma. [Fig. 27.17] . . . . **B. modestiflora**
124. Blades subelliptic, transverse. Indonesia: Sarawak. [Fig. 28.59] . . . . . **B. sarawakensis**
122. Blades strongly and equally cordate at base.
125. Capsule wingless. Sumatra. [Fig. 28.11] . . . . **B. trigonocarpa**
125. Capsule alate.
126. Margin repand or sublobate.
127. Ovary 2-celled; mature blades completely glabrous.
128. Blades suborbicular, very broadly subacute. Malaya. [Fig. 28.54] . . . . **B. phoeniogramma**
128. Blades broadly ovate, acute. Java. [Fig. S34] . . . . **B. rupicola**
127. Ovary 3-celled; mature blades at least partially vestite.
129. Margin double-crenate with narrow sinuses; peduncle several times as long as the petioles; inflorescence short, few-flowered. Bolivia. [Fig. 28.32] . . . . . . ***B. clarkei**
129. Margin repand-dentate with very wide and shallow sinuses; peduncle shorter than the petioles; inflorescence many-flowered. Mexico. [Fig. 28.60] . . . **B. macdanielsii**
126. Margin evenly rounded and cut to entire.
130. Blades ovate, broadest below the middle.
131. Blades nearly transverse to petiole. Siam. [Fig. 28.52] . . . . **B. curtisii**
131. Blades only slightly oblique, more or less cut, broadly rounded or subacute at apex. East Africa: Kenya. [Fig. 12.12] . . . . **B. wakefieldii**

130. Blades broadly elliptic, suborbicular, or quadrate, strongly oblique.
132. Blades broadly subacute, bicolored with dark bands along the principal nerves. East Africa: Tanganyika. [Fig. 28.55] ... ***B. riparia***
132. Blades acuminate, concolorous. Borneo.
133. Inflorescence racemose. [Fig. 28.61] ... ***B. cognata***
133. Inflorescence paniculate. [Fig. 28.62] ... ***B. propinqua***

Subkey 29

1. Bracts persistent.
2. Petiole 5–15 times shorter than the blade.
3. Blades linear-lanceolate, about 3 times as long as broad; inflorescence few-flowered; outer staminate tepals vestite; placentas simple.
4. Blade evenly cordate; petioles 10–20 mm long. Brazil: Espírito Santo. [Fig. 29.1] ... ***B. obscura***
4. Blade semicordate with one side auriculate, the other not; petioles 2–9 mm long. Brazil: Santa Catarina.
5. Capsule-wings evenly rounded. [Fig. 19.17] ... ****B. echinosepala***
5. Capsule-wings truncate above and obtusely angled. [Fig. 19.7] ... ***B. insularis***
3. Blades elliptic to broadly lanceolate or ovate, mostly much less than 3 times as long as broad.
6. Stem with straight, spreading setae or stiff hairs.
7. Hairs glandular; upper leaves opposite. Indonesia: Sumatra ... ***?B. teysmanniana***
7. Hairs eglandular; leaves all alternate. Bolivia.
8. Stipules suborbicular; stem densely setose; peduncles shorter than the leaves.
9. Styles bifid, regular; stipules brown. [Fig. 19.6] ... ***B. bangii***
9. Styles irregularly divided; stipules dark green, staminate tepals 2. [Fig. 19.23] ... ***B. chaetocarpa***
8. Stipules narrow, pale; stem laxly vestite; peduncles exceeding the leaves.
10. Blades strongly bicolorous; inflorescence uniformly deep red. [Fig. 29.2] ... ****B. cinnabarina***
10. Blades nearly concolorous; tepals pale rose and white, the rest of the inflorescence green. [Fig. 29.3] ... ****B. crinita***
6. Stem soft-hairy to glabrous.
11. Staminate tepals 4.
12. Basal sinus deep with edges partly overlapping, stem very short. Indonesia: Sumatra. [Fig. 24.7] ... ***B. caespitosa***
12. Basal sinus shallow; stem elongate. Brazil: Mato Grosso. [Fig. 20.4] ... ***B. lindmanii***
11. Staminate tepals 2.
13. Inflorescence many-flowered, 4–5 times dichotomous. Bolivia. [Fig. 17.6] ... ***B. varistyla***
13. Inflorescence few-flowered, once dichotomous. Cult. Madagascar. [Fig. 27.36] ... ***?B. humilis***
2. Petiole elongate, mostly less than 5 times shorter than the blade.
14. Blades completely glabrous above at maturity.
15. Petiole-indument of broad, lacerate scales. Mexico. Probable hybrid (cf. Fl. Bras. 4, 1:385, 1861). [Fig. 29.4] ... ****B. phyllomaniaca***
15. Petiole-indument of hairs.

16. Blades deeply cordate with overlapping lobes.

17. Petioles glandular; blades broadly acute. Brazil: Rio de Janeiro. [Fig. 29.5] .... ***B. reniformis***

17. Petioles pilose; blades acuminate. Indonesia: Sumatra. [Fig. 24.7] .... ?***B. caespitosa***

16. Blades shallowly cordate.

18. Peduncles to 45 cm long, much exceeding the petiles. Brazil: State? [Fig. 29.6] .... ***B. huegelii***

18. Peduncles 2–3 cm long, much shorter than the petioles. Indonesia: Celebes. [Fig. 29.7] .... ***B. renifolia***

14. Blades more or less vestite at maturity.

19. Margin entire or regularly and finely cut.

20. Blade-apex acute to acuminate.

21. Margin entire; outer staminate tepals orbicular, red-pubescent; ovary globose, unequally alate. Brazil: Santa Catarina? [Fig. 29.8] .... ****B. scharffii***

21. Margin serrate; outer staminate tepals broadly ovate, subacute, glabrous; ovary turbinate, equally short-horned. Venezuela. [Fig. 20.43] .... ***B. trapa***

20. Blade-apex broadly rounded and apiculate.

22. Blades sparsely hispid; outer staminate tepals glabrous; pistillate tepals ovate, acuminate; larger capsule-wings rounded. Venezuela. [Fig. 29.9] .... ***B. otophylla***

22. Blades verrucose-pubescent; outer staminate tepals pilose; pistillate tepals oblong, obtuse; largest capsule-wing falciform. Siam. [Fig. 29.10] .... ***B. smithiae***

19. Margin irregularly cut, angled, double-serrate or sublobate.

23. Stem evenly and persistently vestite.

24. Blades 2.5–3 times as long as wide, doubly dentate, stamens on a long column. India. [Fig. 27.34] .... ***B. pedunculosa***

24. Blades barely twice as long as wide, sublobate.

25. Flowers in dense clusters at the end of each branch; stem bearing fimbriate scales. Brazil. [Fig. 29.11] .... ***B. hispida***

25. Flowers 1–2 on the end of each branchlet.

26. Influorescence many-flowered, glandular, pistillate bracteoles narrowly triangular. Brazil: Santa Catarina. [Fig. 29.12] .... ***B. stenolepis***

26. Inflorescence few-flowered, eglandular; pistillate bracteoles broadly ovate. Argentina. [Fig. 29.13] .... ***B. hassleri***

23. Stem glabrous or sparsely and unevenly vestite.

27. Staminate tepals 2. Cult. Madagascar. [Fig. 27.36] .... ?***B. humilis***

27. Staminate tepals 4.

28. Stipules deciduous; stamens on a column. China: Yunnan. [Fig. 29.14] . ?***B. clavicaulis***

28. Stipules persistent.

29. Plant tuberous; blades mostly ovate or oblong; styles irregular; anthers obovoid. Bolivia, Argentina. [Fig. 28.33] .... ***B. micranthera***

29. Plant non tuberous; blades elliptic; styles symmetric; anthers oblong. Brazil: Mato Grosso. [Fig. 20.4] .... ***B. lindmanii***

1. Bracts deciduous.

30. Margin double-dentate or sublobate.

31. Petiole 5–15 times shorter than the mature blade.

32. Blades vestite above. South America.

33. Ovary turbinate, equally cornute; stipules ovate-oblong. Peru. [Fig. 29.15] ..... ***B. hirta***
33. Ovary subglobose, unequally alate; stipules suborbicular. Bolivia.
34. Stipules brown; styles regular, bifid. [Fig. 19.6] .... ***B. bangii***
34. Stipules green; styles irregular, more than bifid. [Fig. 19.23] .... ***B. chaetocarpa***
32. Blades glabrous above.
35. Peduncle much exceeding the leaves; blades deeply cordate; staminate tepals 4. West Indies: Haiti. [Fig. 29.16] .... ***B. platyptera***
35. Peduncle shorter than the leaves; blades shallowly cordate or rounded at base; staminate tepals 2; only the pistillate inflorescence dichotomous. Malaysia.
36. Stems setose. Philippines. [Fig. 14.42] .... ***B. macgregorii***
36. Stems glabrous.
37. Staminate tepals 8–12 mm long, red. Philippines. [Fig. 27.11] .... ***B. cumingii***
37. Staminate tepals 6 mm long, white. New Guinea. [Fig. 27.21] .... ***B. sogerensis***
31. Petiole less than 5 times shorter than the mature blade.
38. Stipules persistent.
39. Blades glabrous above.
40. Petiole-trichomes apical; stipules broadly ovate. 15–25 mm long. Brazil: Rio de Janeiro to Paraná. [Fig. 29.17] .... ***B. pulchella***
40. Petiole-trichomes wide-spread; stipules lanceolate, 1.5–8 mm long. West Indies: Puerto Rico. [Fig. 17.10] .... ***B. decandra***
39. Blades vestite above.
41. Ovary equally 3-horned. Peru. [Fig. 29.15] .... ***B. hirta***
41. Ovary unequally 3-alate.
42. Stem densely pilose with tuberculate hairs. Africa: Tanganyika. [Fig. 29.18] . ***B. engleri***
42. Stem glabrous or glabrescent.
43. Pistillate tepals 5. Cuba, Jamaica. [Fig. 29.19] .... ***B. acutifolia***
43. Pistillate tepals 2. Formosa .... ***B. bui-montana***
38. Stipules deciduous.
44. Ovary equally 3-horned.
45. Staminate pedicels dilated upward. Ecuador. [Fig. 29.20] .... ***B. fuchsiiflora***
45. Staminate pedicles slenderly cylindric. Venezuela. [Fig. 29.21] .... ***B. trapa***
44. Ovary equally or unequally alate.
46. Capsule-wings strongly unequal.
47. Peduncles much shorter than the petioles. Africa: Congo .... ***B. bequaertii***
47. Peduncles much longer than the petioles.
48. Pedicles, axes, and peduncles glabrous. Cuba. [Fig. 12.16] .... ***B. cubensis***
48. Pedicels, axes, and peduncles vestite. Brazil: Rio de Janeiro. [Fig. 29.22] . ***B. occhionii***
46. Capsule-wings equal or subequal.
49. Petioles with lacerate mostly collar-shaped scales; inflorescence 4 times dichotomous; staminate and pistillate tepals 2. Mexico. [Fig. 3.2] .... ***B. manicata***
49. Petioles with filamentous trichomes.
50. Capsule-wings subtriangular, truncate above; blades papillose above. Cultivation. Origin unknown. [Fig. S35] .... ****B. bufoderma***
50. Capsule-wings narrowly crescentiform.
51. Placentas simple; capsule truncate or rounded. Brazil: Santa Catarina, Rio Grande do Sul. [Fig. 29.23] .... ***B. isopterocarpa***

51. Placentas bilamellate; capsule rostrate. Central America: Guatemala, Honduras, Nicaragua, Costa Rica, and Panama. [Fig. 29.24] . . . . *B. udisilvestris*

30. Margin entire or slightly and regularly cut.

52. Petioles 5–15 times shorter than the mature blades.

53. Stipules persistent; stems vestite above.

54. Staminate tepals 2.

55. Blades obovate; capsule-wings subequal. Borneo. [Fig. 14.45] . . . . *B. articulata*

55. Blades oblong or ovate-oblong capsule-wings very unequal. Bolivia. [Fig. 29.25] . . . . *B. buchtienii*

54. Staminate tepals 4.

56. Blades acuminate; stem setose. Philippines. [Fig. 14.42] . . . . *B. macgregorii*

56. Blades obtuse; stem pilosulous.

57. Base woody; inflorescence once dichotomus, 4–6-flowered. Cuba. [Fig. 12.16] . . . . *B. cubensis*

57. Base tuberous; inflorescence 2–3 times dichotomous. India. [Fig. 28.34] . *B. integrifolia*

53. Stipules deciduous.

58. Staminate tepals 2; capsule-wings unequal, truncate above. New Guinea. [Fig. 27.32] . . . . *Symbegonia papuana*

58. Staminate tepals 4.

59. Inflorescence few-flowered; placentas simple; blades mostly 3 times as long as wide. Brazil: São Paulo. [Fig. 29.26] . . . . *B. bradei*

59. Inflorescence many-flowered; placentas bilamellate; blades about twice as long as wide.

60. Blades remotely serrate; pistillate bracteoles persistent, orbicular, serrulate-ciliate; capsule-wings very unequal. Colombia.[Fig. 16.2] . . . . *B. dugandiana*

60. Blades entire; pistillate bracteoles deciduous; capsule-wings subequal. Brazil: Espírito Santo. [Fig. 29.27] . . . . *B. albidula*

52. Petioles less than 5 times shorter than the mature blades.

61. Petiole-trichomes apical. Brazil.

62. Petiole-trichomes filamentous. Santa Catarina. [Fig. 19.14] . . . . *B. lineolata*

62. Petiole-trichome a single, collar-shaped, entire trichome. Minas Gerais. [Fig. 29.28] . . . . *B. collaris*

61. Petiole-trichomes wide-spread.

63. Blades completely glabrous above.

64. Petiole-trichomes of lacerate scales; inflorescence many-flowered.

65. Staminate tepals 2. Mexico. [Fig. 3.2] . . . . *B. manicata*

65. Staminate tepals 4.

66. Petiole twice as long as the blade or more; inflorescence once dichotomus. Brazil: Santa Catarina. [Fig. 29.29] . . . . *B. solitudinis*

66. Petiole not more than a fourth as long as the blade. Philippines? . . . . . . ?*B. oxysperma*

64. Petiole-trichomes filamentous, simple.

67. Stem densely vestite; staminate tepals 4.

68. Stipules puberulent; peduncles exceeding the leaves; inflorescence lax. Brazil: Rio de Janeiro. [Fig. 29.34] . . . . *B. epipsila*

68. Stipules glandular; peduncles shorter than the leaves; inflorescence dense. Brazil: São Paulo. [Fig. 29.30] . . . . *B. piresiana*

67. Stem glabrous or glabrescent; staminate tepals 2. New Guinea. [Fig. 27.32] . . . . *Symbegonia papuana*

68. Blades at least partially vestite above.
69. Mature blades densely tomentose or tomentulose beneath with fine crisped hairs, entire or subentire.
70. Stipules deciduous, minute. Bolivia. [Fig. 29.31] . . . . ***B. andina***
70. Stipules persistent, large.
71. Placentas bilamellate; stipules fenestrate with fine cross-veins. Brazil? [Fig. 29.32] . . . . ****B. venosa***
71. Placentas simple; stipules without cross-veins. Brazil.
72. Plant stout, erect; stipules deciduous; inflorescence many-flowered. Rio de Janeiro. [Fig. 29.33] . . . . ***B. tomentosa***
72. Plant low, weak; stipules persistent; inflorescence few-flowered.
73. Blades glabrous and concolorous above. Rio de Janeiro. [Fig. 29.34] . . . ***B. epipsila***
73. Blades strongly vestite and dark green with a prominent longitudinal white band above. Cultivated. Rio Grande do Sul; Paraguay, Argentina. [Fig. 14.41] . . . . ****B. listada***
69. Mature blades sparsely vestite to glabrous beneath.
74. Staminate tepals 2.
75. Stems glabrous; blades finely serrate; staminate tepals glabrous. Bolivia. [Fig. 29.25] . . . . ***B. buchtienii***
75. Stems sparsely tomentose; blades entire or subentire; staminate tepals vestite. Brazil: Santa Catarina. [Fig. 19.13] . . . . ***B. rupium***
74. Staminate tepals 4.
76. Stem short with few internodes; placentas bilamellate. Siam.
77. Blades ovate, triangular-acute. [Fig. 29.35] . . . . ***B. socia***
77. Blades elliptic, broadly rounded and apiculate. [Fig. 29.10] . . . . ***B. smithiae***
76. Stem elongate with numerous internodes; placentas simple. Brazil.
78. Blades ovate, about twice as long as wide. Cultivated. State? [Fig. 29.36] . ****B. rigida***
78. Blades oblong, about 3 times as long as wide. São Paulo. [Fig. 29.26] . . . . . ***B. bradei***

Subkey 30

1. Bracts persistent.
2. Margins double-dentate or sublobate.
3. Blades more than 3 times as long as wide.
4. Petioles only 2–3 times shorter than the blades.
5. Staminate tepals 4; pistillate tepals 6. Brazil: Rio de Janeiro. [Fig. 30.1] . . . ****B. dietrichiana***
5. Staminate and pistillate tepals each 2. Peru. [Fig. 30.2] . . . . ****B. falcifolia***
4. Petioles 3–10 times shorter than the blades.
6. Blades rounded-subtruncate at base; capsule-wings acute below. Philippines. [Fig. 27.22] . . . . ***B. subtruncata***
6. Blades cordate or semicordate at base; capsule-wings rounded below.
7. Capsule-wings equal or subequal. Mexico and Guiana to Peru. [Fig. 20.21] . . ***B. semiovata***
7. Capsule-wings very unequal. Central America: Nicaragua, Costa Rica, Panama to Surinam, Colombia, and Venezuela. [Fig. 20.22] . . . . ***B. filipes***
3. Blades distinctly less than 3 times as long as wide.
8. Blades completely glabrous or only sparsely ciliate on the margins.
9. Stipules persistent.
10. Upper internodes short, covered by the stipules. Peru. [Fig. 20.9] . . . . . . ***B. obtecticaulis***

10. Upper internodes elongate; stipules all remote. Africa: Angola. [Fig. 30.3] *B. angolensis*

9. Stipules deciduous; staminate tepals 2.

11. Anthers clavate. British Solomon Islands. [Fig. 27.27] . . . . *B. salomonensis*

11. Anthers linear.

12. Staminate tepals deltoid, acute. Madagascar. [Fig. 30.4] . . . . *B. majungaënsis*

12. Staminate tepals broadly ovate, rounded. Peru. [Fig. 30.5] . . . . *B. lucifuga*

8. Blades more or less vestite above or beneath.

13. Stipules deciduous; inflorescence dense, few-flowered; ovary 4-celled; capsule-wings subequal, small. China: Yunnan. [Fig. 20.11] . . . . *B. tetragona*

13. Stipules persistent.

14. Blades acute to obtuse.

15. Stipules glabrous.

16. Blades vestite above. Brazil: Bahía. [Fig. 30.6] . . . . *B. sylvatica*

16. Blades vestite on the nerves beneath. Bolivia. [Fig. 30.7] . . . . *B. unduavensis*

15. Stipules ciliate; peduncles mostly shorter than the leaves.

17. Base tuberous; stem erect; anthers obovate. Bolivia, Argentina. [Fig. 28.33] . . . . *B. micranthera*

17. Base narrow; stem prostrate, then ascending; anthers linear. Brazil: Mato Grosso. [Fig. 20.4] . . . . *B. lindmanii*

14. Blades acuminate.

18. Staminate tepals 2.

19. Largest capsule-wing semiorbicular, as high as wide; staminate tepals suborbicular. Cult. Madagascar. [Fig. 27.36] . . . . ?*B. humilis*

19. Largest capsule-wing about twice as wide as high; staminate tepals narrow. Central America: Nicaragua, Panama to Surinam, Colombia, and Venezuela. [Fig. 20.22] . . . . *B. filipes*

18. Staminate tepals 4.

20. Anthers linear or oblong.

21. Blades irregularly crenate-serrate, deeply cordate. Africa: Etiopia. [Fig. 27.28] . . . . *B. abyssinica*

21. Blades sublobate, shallowly cordate. Paraguay. [Fig. 30.8] . . . . *B. fiebrigii*

20. Anthers obovoid.

22. Pistillate tepals 3; capsule-wings all narrow; plant to 2.5 m high. Mexico. [Fig. 30.9] . . . . *B. candollei*

22. Pistillate tepals 5; at least the largest capsule-wing broad; plant low. Bolivia, Argentina. [Fig. 28.33] . . . . *B. micranthera*

2. Margins regularly cut to entire.

23. Blades rounded or subtruncate at base, sometimes retuse, but not notably cordate.

24. Blades 12 times as long as the 6 mm long petiole, 3–4 times as long as wide; stipules setiferous at apex; staminate tepals 2. Indonesia: Lingga Arch. [Fig. 27.23] . . . . *B. axillaris*

24. Blades 1–5 times as long as the petiole.

25. Blades broadly subacute, crenate. Brazil: Ceará. [Fig. 17.17] . . . . *B. pilderifolia*

25. Blades acuminate.

26. Pistillate tepals 5, more than 4 times as long as wide; capsule-wings large, unequal.

27. Blades oblique to petiole. Bolivia. [Fig. 30.10] . . . . *B. unilateralis*

27. Blades transverse to petiole. Peru. [Fig. 30.11] . . . . *B. stenotepala*

26. Pistillate tepals 4 or 6, less than twice as long as wide; capsule-wings vestigial; capsule 3-lobed.
28. Pistillate tepals 4. India. [Fig. 30.12] .... **B. inflata**
28. Pistillate tepals 6. Malaya. [Fig. 20.8] .... **B. tricornis**
23. Blades distinctly cordate or semicordate at base.
29. Staminate tepals 2.
30. Stipules ovate, acute, imbricate, to 40 mm long. Brazil: Santa Catarina. [Fig. 17.25] .... **B. konder-reisiana**
30. Stipules lanceolate, acuminate, separate, 6 mm long. Cult. Madagascar ...... ?**B. humilis**
29. Staminate tepals 4.
31. Capsules wingless; stipules persistent. Mauritius. [Fig. 30.13] .... **B. salaziensis**
31. Capsules alate.
32. Wings strongly unequal; ovary 2-celled.
33. Basal blade-sinus narrow, V-shaped. Malaya. [Fig. 30.14] .... **B. debilis**
33. Basal blade-sinus broad, U-shaped. Siam. [Fig. 28.53] .... **B. haniffii**
32. Wings equal or subequal; ovary 3-celled.
34. Mature blades regularly and closely serrate, 3 times as long as wide; anthers oblong. Brazil: Rio de Janeiro. [Fig. 30.1] .... *__B. dietrichiana__
34. Mature blades entire or subentire, about twice as long as wide; anthers obovoid.
35. Inflorescence densely many-flowered; stem stout. Cultivated. Brazil. [Fig. 30.15]..... .... *__B. dichroa__
35. Inflorescence very laxly few-flowered; stem very slender. Indonesia: Sumatra. [Fig. 30.16] .... **B. tenericaulis**
1. Bracts deciduous.
36. Margins duplicate-dentate or sublobate.
37. Blades distally triangular.
38. Staminate tepals 2; pistillate tepals 5.
39. Blades spiculiform-pilosulous above; largest capsule-wing suborbicular. Cult. Madagascar. [Fig. 27.36] .... ?**B. humilis**
39. Blades completely glabrous; largest capsule-wing ovate or subtriangular; stipules deciduous.
40. Petioles 8–12 mm long. Bolivia. [Fig. 30.17]........................ **B. bridgesii**
40. Petioles 28–32 mm long. Peru. [Fig. 30.5] .... **B. lucifuga**
38. Staminate tepals 4.
41. Anthers obovoid.
42. Blades about twice as long as wide, about as long as the petioles. Peru. [Fig. 30.18] .... **B. arrogans**
42. Blades about 3 times as long as wide, 4–5 times as long as the petioles. Mexico. [Fig. 30.19] .... *__B. incarnata__
41. Anthers narrow, linear, oblong, or elliptic.
43. Stipules large, conspicuous, persistent. Brazil: Rio de Janeiro to Santa Catarina. [Fig. 30.20] .... **B. angulata**
43. Stipules inconspicuous.
44. Plant tuberous; leaf-axils bulblet bearing; capsule-wings subequal. Africa: Tanganyika. [Fig. 30.21] .... **B. stolzii**
44. Plant non-tuberous. West Indies: Greater Antilles.
45. Stamens 30–50; blades about twice as long as wide.

46. Stipules persistent.

47. Blades irregularly crenate-serrate with low projections. Haiti. [Fig. 30.22] . . . . *B. abbottii*

47. Blades duplicate-dentate with the larger projections long and narrow. Cuba. [Fig. 30.23] . . . . *B. maestrensis*

46. Stipules quickly deciduous.

48. Blades obscurely undulate-crenulate, subtruncate at base. Jamaica. [Fig. 30.24] . . . . *B. minor*

48. Blades strongly double-dentate to sublobate, deeply cordate at base. Haiti. [Fig. 30.25] . . . . *B. notiophila*

45. Stamens 5–22.

49. Petioles to 75 mm long; blades irregularly crenate with low projections, about twice as long as wide. Haiti.

50. Stamens 20–22. [Fig. 30.26] . . . . *B. brachypoda*

50. Stamens 5–7. [Fig. 30.27] . . . . *B. bolleana*

49. Petioles to 40 mm long; blades double-dentate or sublobate with large projections, mostly about 3 times as long as wide.

51. Pistillate bracteoles sharply serrate, ciliate; smaller capsule-wings 3–5 mm wide. Cuba, Jamaica. [Fig. 29.19] . . . . *B. acutifolia*

51. Pistillate bracteoles entire; smaller capsule-wings 0.5 mm wide. Haiti, Santo Domingo. [Fig. 30.28] . . . . *B. plumieri*

37. Blades distally curving to a subacute to acuminate apex, mostly elliptic to oblong.

52. Ovary- or capsule-wings strongly unequal (unknown in *B. imperfecta* and *B. leucosticta*).

53. Stipules persistent.

54. Staminate tepals 2.

55. Blades about 3 times as long as wide, white-spotted. Philippines. [Fig. 20.15] . . . . ?*B. leucosticta*

55. Blades about 2 times as long as wide, concolorous.

56. Blades only slightly oblique, finely double-dentate. Peru. [Fig. 20.12] . . *B. juninensis*

56. Blades nearly transverse, coarsely double-dentate. Indonesia.

57. Anthers ellipsoid. Borneo . . . . *B. pendula*

57. Anthers globose, strongly zygomorphic. Celebes. [Fig. 30.29] . . . . . . ?*B. imperfecta*

54. Staminate tepals 4.

58. Blades sublobate with large broad projections, only slightly oblique. Peru. [Fig. 30.18] . . . . *B. arrogans*

58. Blades sinuate with broadly curved sinuses between the major projections. Brazil.

59. Peduncles about equaling the petioles. Pernambuco. [Fig. 20.42] . . . . *B. pickelii*

59. Peduncles 2–3 times as long as the petioles.

60. Blades biacute. Rio de Janeiro. [Fig. 30.30] . . . . *B. riedelii*

60. Blades with the smaller end rounded. Rio de Janeiro, São Paulo. [Fig. 30.31] . . . . *B. angularis*

53. Stipules deciduous.

61. Staminate tepals 2.

62. Blades about 3 times as long as wide, white-spotted. Philippines. [Fig. 20.15] . . . . ?*B. leucosticta*

62. Blades about 2 times as long as wide, concolorous.

63. Petiole 10 times shorter than the blade; anthers linear; connective produced, acute. Central America: Costa Rica, Panama. [Fig. 20.23] .... ***B. carpinifolia***
63. Petiole to 4 times shorter than the blade.
64. Anthers narrow, obovate-oblong or ovate-oblong; connective produced.
65. Pistillate bracteoles deciduous; tepals as broad as long. Bolivia. [Fig. 30.17] .... ***B. bridgesii***
65. Pistillate bracteoles persistent; tepals distinctly longer than broad. Colombia........................ ***B. magdalenae***
64. Anthers broad; connective not produced.
66. Major blade-projections broadly rounded. British Solomon Islands. [Fig. 27.27] .... ***B. salomonensis***
66. Major blade-projections acute to acuminate. Indonesia: Celebes. [Fig. 30.29]........................ ?***B. imperfecta***
61. Staminate tepals 4.
67. Pistillate tepals 3; anther-connective much produced. Colombia. [Fig. 16.16]........................ ***B. cymbalifera***
67. Pistillate tepals 5; anther-connective slightly produced. West Indies: Greater Antilles.
68. Smaller capsule-wings linate, narrowly rounded; blades mostly cordate. Jamaica.
69. Staminate tepals 12–15 mm long; stamens 30–50; styles ½ bifid. [Fig. 30.24] .... ***B. minor***
69. Staminate tepals 7.5 mm long; stamens 8–10; styles bifid nearly to base. (*B. purpurea* Sw.) [Fig. 30.32] .... ***B. jamaicensis***
68. Smaller capsule-wings obtusely angled; staminate tepals 7.5–10 mm long. Cuba.
70. Blades strongly oblique, cordate. [Fig. 30.33] .... ***B. wrightiana***
70. Blades weakly oblique, broadly rounded to emarginate at base. [Fig. 12.16]........................ ***B. cubensis***
52. Ovary- or capsule-wings equal, subequal, or lacking (unknown in *B. imperfecta* and *B. leucosticta*).
71. Blades truncate or subtruncate at base.
72. Blades 4 times as long as wide; capsule wingless. Indonesia: Celebes. [Fig. 30.34]........................ ***B. aptera***
72. Blades about 3 times as long as wide.
73. Petioles about 5 times shorter than the blades; capsule wingless. India. [Fig. 30.12] .... ***B. inflata***
73. Petioles 10 times shorter than the blades; capsule alate. Philippines. [Fig. 27.22] .... ***B. subtruncata***
71. Blades distinctly cordate or semicordate at base.
74. Staminate tepals 2.
75. Major blade-projections rounded, sublobate; blades white-spotted.
76. Stem very stout with internodes shorter than the stipules. India. [Fig. 30.35]........................ ****B. dipetala***
76. Stem very slender with internodes many times longer than the stipules. Philippines. [Fig. 20.15] .... ?***B. leucosticta***
75. Major blade-projections acute or acuminate; stem geniculate.
77. Blades strongly oblique to transverse. Indonesia: Celebes. 1896 [Fig. 5.18] .... ***B. bonthainensis***

1913 [Fig. 30.29] . . . . ?***B. imperfecta***
77. Blades only slightly oblique.
78. Ovary 4-celled, 4-winged. China. [Fig. 20.11] . . . . ***B. tetragona***
78. Ovary 3-celled, 3-winged.
79. Blades finely toothed, the major projections at the nerve ends but slightly larger than the minor. New Guinea. [Fig. 30.36] . . . . ***B. stilandra***
79. Blades coarsely toothed. Philippines. [Fig. 30.37] . . . . ***B. platyphylla***
74. Staminate tepals 4.
80. Peduncles exceeding the petioles.
81. Placentas bilamellate; blades broadly cordate. Ecuador, Peru. [Fig. 30.38] . . . . ***B. piurensis***
81. Placentas simple; blades mostly emarginate at base. Brazil: Santa Catarina.
82. Stipules persistent; staminate tepals glabrous. [Fig. 30.39] . . . . ***B. catharinensis***
82. Stipules deciduous; outer staminate tepals vestite. [Fig. 29.23] . . . . . ***B. isopterocarpa***
80. Peduncles about equaling the petioles or shorter.
83. Ovary turbinate.
84. Ovary long and narrow; wings vertical. Brazil: Rio de Janeiro. [Fig. 30.40] . . . . ****B. coccinea***
84. Ovary much wider than high.
85. Peduncles about equaling the petioles; ovary 3-celled. Colombia, Venezuela. [Fig. 30.41] . . . . ***B. trispathulata***
85. Peduncles much shorter than the petioles; ovary 4-celled. China: Yunnan. [Fig. 20.11] . . . . ***B. tetragona***
83. Ovary ellipsoid or globose.
86. Ovary beaked at apex. Mexico. [Fig. 30.42] . . . . ***B. oaxacana***
86. Ovary rounded at apex.
87. Blades rounded opposite the apex. India. [Fig. 20.7] . . . . ***B. fallax***
87. Blades acute opposite the apex. Brazil: Rio de Janeiro. [Fig. 20.40] . . . . ***B. pseudolubbersii***
36. Margins finely and subregularly cut to entire.
88. Margins finely and subregularly cut.
89. Staminate tepals 2 or the inner hidden by the stamens.
90. Petiole 5–15 mm long, about 10 times shorter than the blade; staminate tepals narrowly ovate; connective-extension linear, more than twice as long as the anther. Colombia [Fig. 16.11] . . . . ***B. extensa***
90. Petiole 15–50 mm long; staminate tepals orbicular to reniform.
91. Peduncles much longer than the leaves. Peru, Bolivia. [Fig. 30.43] . . . ***B. altoperuviana***
91. Peduncles shorter than the leaves. Central America: Guatemala. [Fig. 20.30] . . . . ***B. convallariodora***
89. Staminate tepals 4.
92. Petiole 4 or more times shorter than the blade.
93. Staminate pedicels narrowly turbinate, thickened upward from a slender base. Ecuador, Peru. [Fig. 29.20] . . . . ***B. fuchsiiflora***
93. Staminate pedicels very slenderly cylindric throughout.
94. Capsule-wings very unequal; inflorescence 5–6 times dichotomous.
95. Pistillate tepals 2 or 3. Central America: Guatemala. [Fig. 20.30] . ***B. convallariodora***

95. Pistillate tepals 5. Brazil: Espírito Santo. [Fig. 30.44] . . . . ***B. admirabilis***
94. Capsule-appendages equal or subequal or the inflorescence 2–3 times dichotomous.
96. Blade acute at apex and at opposite end; ovary ellipsoid. Brazil: Rio de Janeiro. [Fig. 20.40] . . . . ***B. pseudolubbersii***
96. Blade acuminate at apex and broadly rounded at opposite end.
97. Ovary turbinate, equally 3-horned; inflorescence 4 times dichotomous. Venezuela. [Fig. 30.45] . . . . ***B. lipolepis***
97. Ovary ellipsoid, unequally trialate; inflorescence 2–3 times dichotomous. Ecuador. [Fig. 20.6] . . . . ***B. consobrina***
92. Petiole from about equaling the blade to 3 times shorter.
98. Ovary turbinate; pistillate tepals 5. Colombia. [Fig. 30.46] . . . . ***B. cornuta***
98. Ovary ovoid or ellipsoid.
99. Pistillate tepals 2. Colombia. [Fig. 30.47] . . . . ***B. cryptocarpa***
99. Pistillate tepals 5.
100. Stipules deciduous; ultimate branches of inflorescence racemose. Peru. [Fig. 3.36] . . . . ***B. mayasiana***
100. Stipules persistent, ample; inflorescence wholly dichotomous. Brazil. [Fig. 30.48] . . . . ***B. peristegia***
88. Margins obscurely and laxly dentate to entire.
101. Staminate tepals 2.
102. Blades white-spotted.
103. Margin strongly undulate; spots many, small, round; capsule-wings decurrent. Brazil. [Fig. 30.49] . . . . ****B. corallina***
103. Margin not undulate; spots few, large, oblong. British Solomon Islands.
104. Staminate tepals broadly ovate, flat; anthers oblong. [Fig. 20.29] . . . . ***B. weigallii***
104. Staminate tepals orbicular, cucullate; anthers obovoid. [Fig. 20.13] . . . . ***B. somervillei***
102. Blades concolorous.
105. Capsule-wings distinctly unequal.
106. Smaller capsule-wings narrowly linear; pistillate tepals 5. Venezuela. [Fig. 30.50] . . . . ***B. laxa***
106. Smaller capsule-wings semiorbicular.
107. Stipules persistent, elliptic, large, membranous, red. Bolivia. [Fig. S36] . . . . ***B. juntasensis***
107. Stipules deciduous. Peru.
108. Blades acuminate; largest capsule-wing semiorbicular. [Fig. 20.28] . . . . . . ***B. glauca***
108. Blades acute or apiculate; largest capsule-wing broadly ovate with nearly straight ascending upper margin . . . . ***B. pseudoglauca***
105. Capsule-wings equal or subequal.
109. Petioles 6 mm long or about 12 times shorter than the blade; staminate tepals oblong, 1.5 mm long. Indonesia: Lingga Archipelago. [Fig. 27.23] . . . . ***B. axillaris***
109. Petioles 10–30 mm long, 5–6 times shorter than the blades; staminate tepals broadly elliptic or orbicular, 7–15 mm long.
110. Stipules persistent, blades 4 times as long as wide, narrowly triangular above. Bolivia. [Fig. 30.51] . . . . ***B. subcaudata***
110. Stipules deciduous; blades less than 3 times as long as wide, rounded and then acuminate above. Philippines. [Fig. 30.52] . . . . ***B. negrosensis***

101. Staminate tepals 4, rarely 3.
111. Capsule wingless or barely ridged; anthers linear or oblong.
112. Pistillate tepals 5, ~3 mm long. Java. [Fig. 27.25] . . . . ***B. trisulcata***
112. Pistillate tepals 6, 14–16 mm long. China: Yunnan, Kwangsi, Kwantung, Hainan. [Fig. 30.53] . . . . ***B. crassirostris***
111. Capsule with well-developed wings.
113. Capsule-wings distinctly unequal.
114. Stipules ample, persistent, spreading to reflexed. Brazil: Rio de Janeiro, São Paulo. [Fig. 30.31] . . . . ***B. angularis***
114. Stipules 10 mm long. Colombia. [Fig. 16.11] . . . . ***B. extensa***
113. Capsule-wings equal or subequal.
115. Inflorescence 1–2 times dichotomous, few-flowered.
116. Staminate tepals 8–9 mm long; capsule-wings subtriangular. Siam. [Fig. 30.54] . . . . ***B. grantiana***
116. Staminate tepals 22–25 mm long; capsule-wings lunate. Brazil: Rio de Janeiro. [Fig. 20.40] . . . . ***B. pseudolubbersii***
115. Inflorescence 3–4 times dichotomous, many-flowered. Brazil.
117. Blades concolorous green above, red beneath. Rio de Janeiro. [Fig. 30.55] . . . . *_**B. sanguinea**_
117. Blades finely white-spotted above.
118. Peduncle erect; blades acute. Rio de Janeiro. [Fig. 30.56] . . . . *_**B. maculata**_
118. Peduncle decurved; blades acuminate. Cultivation. State? [Fig. 30.49] *_**B. corallina**_

Subkey 31

1. Blades evenly serrate to entire.
2. Blades acuminate.
3. Outer tepals glabrous.
4. Petioles bearing lacerate scales. Sumatra. [Fig. 31.1] . . . . ***B. sychnantha***
4. Petioles bearing simple hairs.
5. Pistillate tepals 5; ovary 3-celled. Colombia. [Fig. 31.2] . . . . ***B. pastoënsis***
5. Pistillate tepals 6; ovary 2-celled. Malaya. [Fig. 28.37] . . . . ***B. leucantha***
3. Outer tepals vestite.
6. Ovary 2-celled. Malaya. [Fig. S37] . . . . ***B. lowiana***
6. Ovary 3-celled.
7. Bracts attenuate, entire; indument of simple hairs. Brazil: Santa Catarina? [Fig. 29.8] . . . . *_**B. scharffii**_
7. Bracts suborbicular, fimbriate; indument stipitate-grandular. Mexico. [Fig. 31.3] . . . . *_**B. viscida**_
2. Blades broadly rounded or subacute to apiculate.
8. Outer tepals variously vestite or uneven.
9. Capsule wingless. Ecuador. [Fig. 31.4] . . . . ***B. exalata***
9. Capsule alate.
10. Outer tepals minutely verrucose; inflorescence 6–7 times dichotomous. Venezuela. [Fig. 31.5] . . . . ***B. verruculosa***
10. Outer tepals pubescent or glandular-hispid; inflorescence once dichotomous.

11. Outer staminate tepals ovate, acute, 17–25 mm long, deep red, appressed-pubescent. Ecuador. [Fig.8.38] .... ***B. froebelii**

11. Outer staminate tepals elliptic, rounded, 6 mm long, pale rose, glandular-hispid. Peru. [Fig. 31.6] .... **B. bifurcata**

8. Outer tepals glabrous, even.

12. Cauline leaf single, suborbicular, 2 cm long. China: Yunnan .... **B. parvula**

12. Cauline leaves several; blade much more than 2 cm long.

13. Pistillate flowers solitary, basal.

14. Staminate tepals 2; filaments half connate into a column. (*B. dielsiana* Gilg, non E. Pritzel.) Africa: Cameroon .... **B. cameroonensis**

14. Staminate tepals 4. Borneo. [Fig. 26.15] .... **B. adenodes**

13. Pistillate flowers numerous; evenly distributed; inflorescence 4–6 times dichotomous; placentas simple.

15. Hairs in a dense ring at the top of the petiole, sparse elsewhere; pistillate tepals narrow, attenuate. Venezuela. [Fig. 29.9] .... **B. otophylla**

15. Hairs laxly and rather evenly distributed along the petiole.

16. Blades truncate at base or very shallowly cordate. Venezuela. [Fig. 31.7] . . . **B. scabrida**

16. Blades deeply cordate at base. Brazil: Bahía. [Fig. 9.5] .... **B. subacida**

1. Blades doubly dentate or serrate, or sublobate.

17. Blades broadly rounded or subacute to apiculate.

18. Placentas simple or sometimes slightly bifid.

19. Petiole indument partly of spreading or reflexed scales. Brazil.

20. Blades bullate. Bahía. [Fig. 31.9] .... **B. neocomensium**

20. Blades even. Rio de Janeiro. [Fig. 31.10] .... **B. paleata**

19. Petiole indument wholly of hairs.

21. Outer tepals suborbicular. Brazil. [Fig. 29.6] .... **B. huegelii**

21. Outer tepals elliptic-oblong. Colombia, Venezuela. [Fig.31.11]........... **B. dichotoma**

18. Placentas completely bilamellate.

22. Anthers obovoid.

23. Blades with large white spots above; ovary 2-celled; capsule-wings equal. Burma. [Fig. 31.12] .... **B. rockii**

23. Blades concolorous above; ovary 3-celled; capsule-wings subequal to very unequal; base tuberous.

24. Tepals ~3 cm long.

25. Blades sublobate with broadly rounded major projections; tepals rose. Peru, Bolivia. [Fig. 28.32] .... ***B. clarkei**

25. Blades duplicate-serrate; tepals white. Africa: Nyassaland. [Fig. 31.13] . . . . **B. nyassensis**

24. Tepals much less 3 cm long.

26. Bracts lanceolate. Burma, Singapore .... **B. parvuliflora**

26. Bracts broadly elliptic or suborbicular.

27. Blades suborbicular, only slightly oblique; leaves, stem, and peduncle hirsute. Argentina. [Fig. 28.6] .... **B. tafiënsis**

27. Blades narrower, some strongly oblique. Bolivia, Argentina. [Fig. 28.33] .... **B. micranthera**

22. Anthers narrow.

28. Peduncle shorter than the leaves.

29. Blades sparsely pilose above. Brazil: Mato Grosso. [Fig. 20.4] . . . . ***B. lindmanii***

29. Blades glabrous above (anthers narrow in description). Africa: Nyassaland. [Fig. 31.13] . . . . ?***B. nyassensis***

28. Peduncle exceeding the leaves.

30. Blades pubescent on the nerves beneath; tepals all glabrous. Ecuador. [Fig. 1.6] . . . . ***B. parcifolia***

30. Blades densely lanate beneath: outer tepals lanate.

31. Outer staminate tepals ovate, acute, to 30 mm long, deep rose. Ecuador. [Fig. 8.38] . . . . ****B. froebelii***

31. Outer staminate tepals reniform, 6 mm long, white. Paraguay. [Fig.31.14] . ***B. balansae***

17. Blades acuminate.

32. Petioles vestite at apex with few or no hairs below.

33. Placentas bilamellate.

34. Styles truncate, regular. Africa: Kenya. [Fig. 31.15] . . . . ***B. keniensis***

34. Styles distinctly bifid, irregular. Bolivia, Argentina. [Fig. 28.33] . . . . ***B. micranthera***

33. Placentas simple. Brazil.

35. Inflorescence 5–6 times dichotomous, stipules deciduous to 55 mm long. Brazil: São Paulo. [Fig. 31.8] . . . . ***B. boraceiensis***

35. Inflorescence 2–4 times dichotomous.

36. Stipules persistent,25–35 mm long; inflorescence 4 times dichotomous. Rio de Janeiro. [Fig. 31.16] . . . . ***B. longibarbata***

36. Stipules deciduous, 7–8 mm long; inflorescence twice dichotomous. São Paulo. [Fig. 31.17] . . . . ***B. reniformis***

32. Petiole with hairs generally distributed.

37. Blades bullate; anthers linear or oblong. Indonesia: Sumatra.

38. Blades duplicate-serrate with only the apex acuminate. [Fig.31.18] . . . . ***B. bifolia***

38. Blades sinuate-sublobate with several acuminate projections. [Fig. 31.19] . . . ***B. beccariana***

37. Blades even.

39. Capsule-wings or horns equal or subequal.

40. Placentas simple. (*B. flava* W. Marais, non Irmscher.) Portuguese East Africa. 1981. [Fig. 28.9] . . . . ***B. flava***

Tanganyika. 1961. [Fig. 30.21] . . . . ?***B. stolzii***

40. Placentas bilamellate. China: Yunnan. [Fig. 31.20] . . . . ***B. discrepans***

39. Capsule-wings distinctly unequal.

41. Outer tepals glabrous.

42. Stipules deciduous; plant tuberous-based. Mexico.

43. Capsule-wings subtriangular; upper stem straight. [Fig. 28.24] . . . . ?***B. palmeri***

43. Capsule-wings broadly rounded; upper stem subgeniculate. [Fig. 28.60] . . . . ?***B. macdanielsii***

42. Stipules persistent.

44. Tepals yellow; anthers subrectangular. Brazil: Rio de Janeiro. [Fig. 25.12] . . ***B. herteri***

44. Tepals white to rose; anthers obovoid to subquadrangular.

45. Outer staminate tepals suborbicular; styles irregular. Bolivia, Argentina. [Fig. 28.33] . . . . ***B. micranthera***

45. Outer staminate tepals broadly ovate; styles regular. China: Yunnan . . . . ***B. yui***

41. Outer tepals vestite.

46. Anthers linear or oblong.
  47. Largest capsule-wing about as wide as high, only about twice as wide as the smaller wings. Brazil: Santa Catarina.
    48. Outer tepals and capsule glandular; largest capsule-wing obtusely angled. [Fig. 29.12] . . . . **B. stenolepis**
    48. Outer tepals and capsule pubescent; all capsule-wings rounded. [Fig. 31.21] . . . . **B. capanemae**
  47. Largest capsule-wing about twice as wide as high, several times wider than the 2 narrow wings.
    49. Bracts linear or oblong. Brazil: Rio de Janeiro to Santa Catarina. [Fig. 29.11] . . . . **B. hispida**
    49. Bracts broad.
      50. Pedicels short-pilose. Brazil: Santa Catarina; Argentina. [Fig. 31.22] . . . . **B. per-dusenii**
      50. Pedicels glandular-pilose. Cultivation. South America. [Fig. 31.23] . . . . ***B. mollicaulis**
46. Anthers obovoid or subglobose.
  51. Stem short with few internodes; smaller capsule-wings many times narrower than the largest. China.
    52. Ovary 3-celled. Kwangtung. [Fig. 31.24] . . . . **B. fordii**
    52. Ovary 2-celled. Yunnan. [Fig. 26.28] . . . . **B. gagnepainiana**
  51. Stem elongate with numerous internodes.
    53. Stipules linear-lanceolate; capsule-wings all rounded. China. [Fig. 12.13] . . . . **B. cathayana**
    53. Stipules broad
      54. Capsule-wings all triangular. Cultivation, origin unknown. [Fig. 4.18] . . . . **B. metallica**
      54. Capsule-wings all rounded. Mexico. [Fig. 31.3] . . . . **B. viscida**

Subkey 32

1. Blades irregularly and densely cut, i.e., doubly dentate, doubly serrate or sublobate.
  2. Capsule-wings subequal to lacking.
    3. Capsule-wings very narrow or lacking.
      4. Petiole-trichomes spread out; blades with several acuminate points; capsule wingless, beakless. Java. [Fig. 32.1] . . . . **B. robusta**
      4. Petiole-trichomes apical; blades with a single acuminate point; capsule narrowly winged, slenderly beaked. Central America: Guatemala, Honduras, Nicaragua, Costa Rica, and Panama. [Fig. 29.24] . . . . **B. udisilvestris**
    3. Capsule-wings well developed.
      5. Anthers broad, obovoid to subglobose.
        6. Staminate tepals 3–4 mm long; inflorescence to 8 times dichotomous, very many-flowered; placentas simple. Colombia to Boliva. [Fig. 4.23] . . . . **B. parviflora**
        6. Staminate tepals 15–25 mm long; inflorescence 1–3 times dichotomous; placentas bilamellate.
          7. Blade acuminate, duplicate-dentate. China: Yunnan. [Fig. 31.20] . . . . **B. discrepans**
          7. Blade broadly subacute, sublobate. Cultivated. Brazil? [Fig. 4.25] . . . . . . ?***B. platanifolia**

5. Anthers linear or oblong. Brazil: Santa Catarina.
8. Petiole-trichomes apical; blades duplicate-dentate. [Fig. 19.14] . . . . ***B. lineolata***
8. Petiole-trichomes spread out; blades sublobate. [Fig. 32.2] . . . . ***B. parvistipulata***
2. Capsule-wings distinctly unequal.
9. Petiole-trichomes in an apical ring; staminate tepals 4.
10. Placentas bifid; petiole-trichomes filamentous. East Africa: Kenya, Uganda. [Fig. 31.15] . . . . ***B. keniensis***
10. Placentas simple. Brazil.
11. Blade-projections broadly rounded. Cultivation.
12. Major blades suborbicular. [Fig. 32.3] . . . . ****B. rutilans***
12. Major blades oblong. [Fig. 30.48] . . . . ****B. peristegia***
11. Major blade-projections acute.
13. Stem short; stipules persistent, attenuate, exceeding the internodes; inflorescence few-flowered, shorter than the leaves. Brazil. [Fig. 24.31] . . . . ***B. neglecta***
13. Stem elongate; stipules deciduous, obtuse, shorter than the internodes; inflorescence many-flowered, exceeding the leaves. Cultivation. [Fig. 32.4] . . . . ****B. valida***
9. Petiole-trichomes spread out.
14. Blades bullate or foveolate.
15. Margin with several acuminate projections. Indonesia: Sumatra. [Fig. 31.19] . . . . ***B. beccariana***
15. Margin with only the apex acuminate. India. [Fig. 32.5] . . . . ***B. foveolata***
14. Blades even between the nerves.
16. Staminate tepals 2.
17. Blades with lateral acuminate projections; flowers many in dense clusters at the ends of the branches; basal bracts large, covering the young inflorescence. Central America.
1853 [Fig. 4.55] . . . . ***B. involucrata***
1908 [Fig. 22.14] . . . . ***B. copeyana***
1927 [Fig. 32.6] . . . . ***B. valerioi***
17. Blades without lateral acuminate projections; flowers few and lax at the ends of the branches.
18. Blades acuminate.
19. Margin red-ciliate. China. [Fig. 5.34] . . . . ***?B. villifolia***
19. Margin eciliate or the cilia colorless.
20. Stem tuberous at base. Mexico. [Fig. 32.7] . . . . ***?B. ornithocarpa***
20. Stem cylindric.
21. Blade-lobes few, subapical, long-attenuate, with broad, flat sinuses. Guatemala to Costa Rica. [Fig. 32.8] . . . . ***B. involucrata***
21. Blade-lobes with narrow sinuses. Mexico to Colombia. [Fig. 22.42] . . . . ****B. sericoneura***
18. Blades broadly subacute to rounded.
22. Staminate tepals vestite. Peru.
23. Indument of hairs. [Fig. 32.9] . . . . ***B. lophoptera***
23. Indument of scales. [Fig. 32.10] . . . . ***B. peltigera***
22. Staminate tepals glabrous.
24. Major blade-projections rounded; staminate tepals 25 mm long. Cultivated. Brazil? [Fig. 4.25] . . . . ***?*B. platanifolia***

24. Major blade-projections broadly subtriangular; staminate tepals 7–8 mm long. Mexico. [Fig. 32.11] . . . . **B. sarcophylla**
16. Staminate tepals 4.
25. Blades acuminate or narrowly triangular toward apex.
26. Margins red-ciliate. China. [Fig. 5.34] . . . . **?B. villifolia**
26. Margins not red-ciliate.
27. Smaller capsule-wings vestigial or lacking, not more than 1 mm wide at most.
28. Margin sublobate.
29. Ovary 2-celled. Burma, Singapore . . . . **?B. parvuliflora**
29. Ovary 3-celled.
30. Stem simple; inflorescence few-flowered; base tuberous. Mexico. [Fig. 32.7] . . . . **?B. ornithocarpa**
30. Stem branched; inflorescence many-flowered; tepals narrow, acute; stamens on a long column. Peru. [Fig. 4.47] . . . . **B. monadelpha**
28. Margin duplicate-dentate.
31. Smaller wings lacking; capsule turbinate. Java. [Fig. 32.1] . . . . **B. robusta**
31. Smaller wings present; largest wing much wider than high.
32. Placentas bilamellate. China: Kweichow. [Fig. 32.12] . . . . **?B. kouy-tcheouensis**
32. Placentas simple. Brazil: São Paulo. [Fig. 32.13] . . . . **B. vicina**
27. Smaller capsule-wings well developed, more than 1 mm wide centrally.
33. Blade-margins red-ciliate. China. [Fig. 5.34] . . . . **?B. villifolia**
33. Blade-margins eciliate or with colorless cilia.
34. Outer tepals strongly vestite.
35. Indument glandular; blades long-ciliate; placentas bilamellate. Mexico. [Fig. 31.3] . . . . **B. viscida**
35. Indument non-glandular.
36. Placentas bilamellate. Siam . . . . **B. subviridis**
36. Placentas simple. Brazil. São Paulo . . . . **B. toledoana**
34. Outer tepals glabrous or glabrescent.
37. Anthers obovoid.
38. Indument glandular. Guatemala, Costa Rica. [Fig. 4.10] . . . . **B. ignea**
38. Indument filamentous or stellate. Africa: Congo . . . . **B. bequaertii**
37. Anthers oblong or elliptic.
39. Placentas simple. Brazil: São Paulo. [Fig. 32.13] . . . . **B. vicina**
39. Placentas bilamellate.
40. Pistillate bracteoles lacking. Ecuador. [Fig. 1.6] . . . . **B. parcifolia**
40. Pistillate bracteoles present. West Indies.
41. Larger capsule-wing subacuminate; pistillate bracteoles linear. Southern Lesser Antilles. [Fig. 32.14] . . . . **B. obliqua**
41. Larger capsule-wing broader; pistillate bracteoles ovate or obovate.
42. Anthers retuse; pistillate bracteoles obovate. Northern Lesser Antilles. [Fig. 32.15] . . . . **B. retusa**
42. Anthers apiculate with slightly produced connective; pistillate bracteoles ovate. Cuba.
43. Blades slightly oblique, rounded or emarginate at base; petioles 3–8 mm long. [Fig. 12.16] . . . . **B. cubensis**

43. Blades mostly transverse, deeply cordate at base; petioles much longer. [Fig. 30.33] .... ***B. wrightiana***

25. Blades apically broadly acute, or rounded, or apiculate; placentas bilamellate.

44. Blades duplicate-dentate; ovary 2-celled. Burma, Singapore .... ***B. parvuliflora***

44. Blades sublobate; anthers ellipsoid or obovoid.

45. Outer staminate tepals to 25 mm long, suborbicular; larger blade-projections rounded. Cultivation. Brazil? [Fig. 4.25] .... ?****B. platanifolia***

45. Outer staminate tepals 3–10 mm long, vestite.

46. Larger blade-projections broadly rounded. Siam. [Fig. 32.16] .... ***B. murina***

46. Larger blade-projections angular. China: Kweichow. [Fig. 32.12] .... ?***B. kouy-tcheouensis***

1. Blades evenly serrate or crenate to entire.

47. Capsule-wings subequal to nearly lacking.

48. Outer tepals vestite.

49. Blades bullate. Java .... ?***B. areolata***

49. Blades even.

50. Blades with a prominent median white strip, acute at both ends. Brazil: Rio Grande do Sul; Paraguay and Argentina. [Fig. 14.41] .... ****B. listada***

50. Blades concolorous, rounded except at apex.

51. Inflorescence once dichotomous or fasciculate.

52. Inflorescence with only 2 basal branches; flowers large, solitary at the ends of the branches. Malaya. [Fig. 32.17] .... ?***B. longicaulis***

52. Inflorescence with at least 3 basal branches; flowers small, densely clustered at the ends of the branches. Sumatra. [Fig. 31.1] .... ***B. sychnantha***

51. Inflorescence more than once dichotomous.

53. Capsule-wings broad, rounded; anthers cuneate-oblong. Brazil.

54. Petioles sulcate, stellate-pubescent; placentas bilamellate. Espírito Santo. [Fig. 32.18] .... ***B. kuhlmannii***

54. Petioles even, bearing very large, amplexicaul scales toward apex; placentas simple. São Paulo. [Fig. 32.19] .... ***B. caraguatatubensis***

53. Capsule-appendages narrow.

55. Ovary globose, narrowly triangular-alate; indument of scales. Brazil: Santa Catarina. [Fig. 32.20] .... ***B. schenckii***

55. Ovary turbinate, horned, surmounted by a long column; indument of hairs. Colombia. [Fig. 32.21] .... ***B. ferruginea***

48. Outer tepals glabrous or glabrescent.

56. Placentas simple; stem branched, woody; inflorescence many-flowered; leaves minutely stellate. Brazil: Minas Gerais. [Fig. 10.2] .... ***B. grisea***

56. Placentas bilamellate.

57. Petioles with large amplexicaul, lacerate bracts. Mexico. [Fig. 3.2] .... ****B. manicata***

57. Petioles bearing simple hairs.

58. Capsules with a long, apical column.

59. Capsules with long, ascending horns; petiole-trichomes spread out. Peru. [Fig. 29.15] .... ***B. hirta***

59. Capsules with narrow, decurrent wings; petiole-trichomes apical. Central America: Guatemala, Honduras, Nicaragua, Costa Rica, Panama. [Fig. 29.24] .... ***B. udisilvestris***

58. Capsules without an apical column; wings broadly rounded.

60. Peduncle and branches membranous-alate; inflorescence few-flowered. Fiji Islands. [Fig. 32.22] . . . . ***B. vitiensis***
60. Peduncle and branches wingless; inflorescence many-flowered. Brazil: São Paulo. [Fig. 29.32] . . . . ****B. venosa***
47. Capsule-wings strongly unequal.
61. Petiole-trichomes an apical ring; placentas simple. Brazil.
62. Petiole-trichome single, collar-shaped. Minas Gerais. [Fig. 29.28] . . . . ***B. collaris***
62. Petiole-trichomes few to many, cylindric. São Paulo.
63. Blades finely reticulate; staminate tepals 4. [Fig. 32.23] . . . . ***B. gehrtii***
63. Blades not reticulate.
64. Staminate tepals 4; petiole-trichomes many, elongate. [Fig. 32.24] . . . . ***B. valdensium***
64. Staminate tepals 2; petiole-trichomes few, short. [Fig. 20.26] . . . . ****B. nuda***
61. Petiole-trichomes spread out along the petiole.
65. Outer tepals vestite.
66. Blades bullate; staminate tepals 2. Mexico. [Fig. 22.34] . . . . ***B. pustulata***
66. Blades even; staminate tepals 4.
67. Blades broadly rounded, or subacute, or apiculate at apex.
68. Placentas simple. Brazil.
69. Stem short; blades densely pilose; style-branches straight. Bahía. [Fig. 10.4] . . ***B. acida***
69. Stem elongate; blades sparsely pilose; style-branches spiral. State? [Fig. 29.36] . . . . ****B. rigida***
68. Placentas bilamellate. Siam.
70. Blades transverse, elliptic. [Fig. 29.10] . . . . ***B. smithiae***
70. Blades slightly oblique, ovate. [Fig. 32.16] . . . . ***B. murina***
67. Blades acuminate.
71. Indument largely of scales.
72. Ovary 2-celled. Burma. [Fig. 28.36] . . . . ***?B. paleacea***
72. Ovary 3-celled. Philippines? . . . . ***B. oxysperma***
71. Indument wholly of hairs.
73. Staminate tepals ~8 mm long.
74. Placentas simple; staminate tepals 4. Brazil: Rio de Janeiro. [Fig. 29.34] . ***B. epipsila***
74. Placentas bilamellate; staminate tepals 2. Bolivia. [Fig. 29.25] . . . . ***B. buchtienii***
73. Staminate tepals 14–18 mm long.
75. Stem glabrous; stipules oblong. Malaya. [Fig. 32.17] . . . . ***?B. longicaulis***
75. Stem glandular-pubescent; stipules ovate. Mexico. [Fig. 31.3] . . . . ***B. viscida***
65. Outer tepals glabrous or glabrescent.
76. Blades broadly rounded, or subacute, or apiculate at apex.
77. Placentas simple.
78. Inflorescence once dichotomous. China: Kweichow . . . . ***?B. parvula***
78. Inflorescence 3–5 times dichotomous.
79. Ovary 4–5-winged. Brazil: Bahía. [Fig. 10.1] . . . . ***B. schlumbergerana***
79. Ovary 3-winged.
80. Anthers obovoid, truncate; blades orbicular densely ciliate. New Guinea. [Fig. 23.25] . . . . ***B. sharpeana***
80. Anthers narrow, the connective produced, rounded; blades elliptic, not notably ciliate. Brazil.
81. Stipules deciduous, ovate-oblong, acute; largest capsule-wing twice as wide as high,

the others vestigial. São Paulo. [Fig. 31.8] .... ***B. boraceiensis***
81. Stipules persistent, obovate, retuse; largest capsule-wing higher than wide, the others well developed. Espírito Santo. [Fig. 32.25] .... ***B. curtii***
77. Placentas bilamellate.
82. Largest capsule-wing as wide to much wider than high, the others very narrow.
83. Anthers narrow; outer staminate tepals ovate; ovary 3-celled. West Indies: Haiti. [Fig. 32.26] .... ***B. pycnantha***
83. Anthers obovoid; outer staminate tepals orbicular; ovary 2-celled. India.
84. Staminate tepals 4, pistillate tepals 5. [Fig. 28.34] .... ***B. integrifolia***
84. Staminate tepals 2, pistillate tepals 3–4 .... ***B. nepalensis***
82. Largest capsule-wing not much if any wider than high, one or two others nearly as large.
85. Staminate tepals 2.
86. Stigmas lunate. Mexico, Guatemala. [Fig. 32.11] .... ***B. sarcophylla***
86. Stigmas bicornate. Central America: Costa Rica, Panama. [Fig. 32.27] .... ***B. multinervia***
85. Staminate tepals 4.
87. Inflorescence ~5 times dichotomous. West Indies: Haiti, Dominican Republic. [Fig. 32.28] .... ***B. domingensis***
87. Inflorescence 1–2 times dichotomous.
88. Bracts deciduous. West Indies: Cuba. [Fig. 12.16] .... ***B. cubensis***
88. Bracts persistent, ciliate. Brazil: Mato Grosso. [Fig. 20.4] .... ***B. lindmanii***
76. Blades acuminate.
89. Inflorescence 1–2 times dichotomous.
90. Inflorescence 1–2-flowered.
91. Stem hirsute. China: Kweichow .... ?***B. parvula***
91. Stem glabrous. Malaya. [Fig. 32.17] .... ?***B. longicaulis***
90. Inflorescence more than 2-flowered.
92. Anthers narrow.
93. Ovary 2-celled. China: Yunnan. [Fig. 32.29] .... ***B. dryadis***
93. Ovary 3-celled. Cultivated. Origin unknown. [Fig. 32.30] .... ?****B. stipulacea***
92. Anthers broad.
94. Petiole-trichomes largely scales; ovary 2-celled. Burma. [Fig. 28.36] .... ?***B. paleacea***
94. Petiole-trichomes wholly hairs; ovary 3-celled.
95. Capsule-wings all marginiform. Colombia, Ecuador. [Fig. 31.2] ...... ***B. pastoënsis***
95. Capsule-wings all broad. Siam. [Fig. 29.35] .... ***B. socia***
89. Inflorescence 3–7 times dichotomous.
96. Smaller capsule-wings linear.
97. Blades laxly setose above; inflorescence 7 times dichotomous. Central America: Costa Rica. [Fig. 32.31] .... ***B. corredorana***
97. Blades glabrous above; inflorescence 3–4 times dichotomous. West Indies: Haiti. [Fig. 32.26] .... ***B. pycnantha***
96. Smaller capsule-wings broader.
98. Outer staminate tepals 3 mm long; stipules persistent. Colombia, Ecuador. [Fig. 32.32] .... ***B. microcarpa***
98. Outer staminate tepals 6–22 mm long; stipules deciduous.
99. Staminate tepals 2, 10 mm long. Madagascar. [Fig. 32.33] .... ***B. lyallii***

99. Staminate tepals 4.
100. Placentas simple; outer staminate tepals 16–22 mm long. Brazil: São Paulo. [Fig. 32.34] .... ***B. fernando-costae***
100. Placentas bilamellate; outer staminate tepals 6–12.5 mm long. West Indies.
101. Pistillate bracteoles linear; largest capsule-wing subacuminate. Southern Lesser Antilles. [Fig. 32.14] .... ****B. obliqua***
101. Pistillate bracteoles broad; largest capsule-wing broader at apex. Northern Lesser Antilles.
102. Capsule-wings acute. Guadeloupe. [Fig. 32.35] .... ***B. odorata***
102. Capsule-wings subrounded. Dominica .... ***B. dominicalis***

Subkey 33

1. Capsule-wings equal or lacking.
2. Blades acuminate or attenuate.
3. Blades white-spotted above, attenuate. South Africa. [Fig. 28.44] .... ****B. dregei***
3. Blades concolorous above, acuminate.
4. Margins entire or evenly cut.
5. Stem simple; stipules oblong-ovate, acuminate, ~8 mm long; anthers narrowly obovoid. Philippines. [Fig. 27.7] .... ***B. bolsteri***
5. Stem branched; stipules oblong-obovate, obtuse or mucronulate; anthers linear-oblong; inflorescence 5 times dichotomous. Peru. [Fig. 20.28] .... ***B. glauca***
4. Margins duplicate-dentate or sublobate.
6. Blades with rounded major projections, sublobate; anthers linear or oblong. Peru. [Fig. 33.1] .... ***B. tribracteata***
6. Blades with acute major projections, duplicate-dentate; anthers broader.
7. Anthers elliptic, equaling the filaments; staminate tepals 5 mm long. Philippines. [Fig. 30.37] .... ***B. platyphylla***
7. Anthers clavate or subglobose and truncate. Indonesia: Celebes.
8. Staminate tepals broadly ovate, 7 mm long. [Fig. 30.29] .... ?***B. imperfecta***
8. Staminate tepals broadly elliptic or suborbicular, ~18 mm long. [Fig. 5.18] .... ***B. bonthainensis***
2. Blades rounded or broadly acute or apiculate at apex.
9. Blades suborbicular, only slightly oblique; margin sublobate. Cultivated. Brazil? [Fig. 4.25] .... ?****B. platanifolio***
9. Blades narrower, strongly oblique to transverse. South Africa.
10. Fruit baccate, wingless. Seychelles Islands, Indian Ocean. [Fig. 33.2] ...... ***B. seycheilensis***
10. Fruit capsular, alate. South Africa: Natal.
11. Stipules lanceolate, acuminate, ~14 mm long. [Fig. 33.3] .... ***B. homonyma***
11. Stipules ovate or ovate-oblong. [Fig. 28.44] .... ***B. dregei***
1. Capsule-wings strongly unequal.
12. Blades duplicate-dentate or sublobate.
13. Inflorescence 1–3 times dichotomous.
14. Flowers many at the ends of stout branches; basal bracts very large.
15. Plants strongly vestite; flowers fascicled at the ends of stout branchlets. Central America:

Costa Rica, Panama. [Fig. 4.55] . . . . **B. involucrata**

15. Plants glabrous; flowers 2 at the ends of slender branchlets. Peru.

16. Basal bracts fused, basal scar continuous. [Fig. 33.4] . . . . **B. cyathophora**

16. Basal bracts separate, basal scar partial . . . . **B. subciliata**

14. Flowers single or few at the ends of slender branches.

17. Major blade-projections rounded, blade sublobate.

18. Blades suborbicular, their sinuses acute; staminate tepals serrate, 25 mm long. Cultivated. Brazil? [Fig. 4.25] . . . . ?***B. platanifolia**

18. Blades ovate or elliptic, their sinuses curved; staminate tepals entire, 10–20 mm long; placentas bilamellate.

19. Pistillate tepals 2; blades elliptic, transverse, staminate tepals 10 mm long. Cultivation. Peru. [Fig. 33.5] . . . . **B. roezlii**

19. Pistillate tepals 4, rarely 3; blade ovate, slightly oblique; staminate tepals 15–20 mm long. Madagascar. [Fig. 33.6] . . . . **B. perrieri**

17. Major blade projections acute to acuminate; blade duplicate-dentate.

20. Anthers subglobose.

21. Plant low, soft with fibrous roots; blades pubescent above; bracts persistent; staminate tepals narrow. Central America: Nicaragua, Costa Rica, Panama to Surinam, Colombia, Venezuela. [Fig. 20.22] . . . . **B. filipes**

21. Plant tall, half shrubby; blades glabrous; bracts deciduous; staminate tepals broader than long. Indonesia: Celebes. [Fig. 30.29] . . . . ?**B. imperfecta**

20. Anthers narrower.

22. Ovary unilocular; placentas parietal; anthers obovate-cuneate. Africa: Tanganyika . . . . **B. pycnocaulis**

22. Ovary trilocular; placentas central.

23. Major blade-projections attenuate. Mexico. [Fig. 33.7] . . . . ***B. purpusii**

23. Major blade-projections acute.

24. Blades slightly oblique at most. Peru. [Fig. 20.12] . . . . **B. juninensis**

24. Blades strongly oblique to transverse.

25. Major blade-projections 2–3; blades often white-spotted above. South Africa. [Fig. 28.44] . . . . ***B. dregei**

25. Major blade-projections many; blades concolorous above. Indonesia: Celebes. [Fig. 28.13] . . . . **B. strictipetiolaris**

13. Inflorescence 4–7 times dichotomous.

26. Blades rounded, broadly acute, or apiculate at apex.

27. Inflorescence-branches short and stout; largest capsule-wing much wider than high. Madagascar. [Fig. 33.8] . . . . ?**B. baronii**

27. Inflorescence-branches long and slender.

28. Placentas simple. Brazil. [Fig. 30.6] . . . . ?**B. sylvatica**

28. Placentas bilamellate. Peru, Bolivia. [Fig. 30.43] . . . . **B. altoperuviana**

26. Blades acuminate.

29. Stipules persistent. Peru. [Fig. 33.9] . . . . **B. subspinulosa**

29. Stipules deciduous.

30. Mature blades completely glabrous, non-ciliate; largest capsule-wing 9–10 mm wide. Peru.

31. Outer basal lobe of blade covering apex of petiole; blade without cystospheres; largest capsule-wing ovate. [Fig. 33.10] . . . . **B. viridiflora**

31. Outer basal lobe of blade short, not covering apex of petiole; blade with cystospheres; largest capsule-wing semicordate on both sides .... ***B. glaucoides***
30. Mature blades ciliate.
32. Blades slightly oblique. Central America: Costa Rica, Panama. [Fig. 20.23] .... ***B. carpinifolia***
32. Blades strongly oblique to transverse. Peru.
33. Plant shrubby to 3 m high; upper bracts linear. [Fig. 33.11] .... ***B. suprafastigiata***
33. Plant herbaceous 30–45 cm high; upper bracts obovate. [Fig. 21.21] .... ***B. bracteosa***
12. Blades entire or evenly cut.
34. Inflorescence 1–3 times dichotomous.
35. Stipules persistent; blades acuminate.
36. Internodes short.
37. Bracts persistent to 1 cm long; staminate tepals 4. Mexico. [Fig. 33.12] .... ***B. mazae***
37. Bracts deciduous, staminate tepals 2.
38. Anthers obovate; capsule-wings reflexed. Central America: El Salvador. [Fig. 25.18] .... ***B. assurgens***
38. Anthers elliptic; capsule-wings very narrow. New Guinea. [Fig. 22.12] ...... ***B. rieckei***
36. Internodes 7–13 cm long.
39. Inflorescence once dichotomous, 2-flowered. Malaya. [Fig. 32.17] .... ***B. longicaulis***
39. Inflorescence 3 times dichotomous, at least 8-flowered. Bolivia. [Fig. 33.13] .... ***B. santarosensis***
35. Stipules deciduous.
40. Basal bract single, cyathiform; flowers many at the end of each branch. Peru. [Fig. 33.4] .... ***B. cyathophora***
40. Basal bracts 2, distinct.
41. Blades only slightly oblique. Peru. [Fig. 20.12] .... ***B. juninensis***
41. Blades strongly oblique to transverse.
42. Largest capsule-wing to 27 mm wide, more than twice as wide as high and twice as wide as the smaller wings; styles more than 2-branched. Bolivia. [Fig. 33.14] .... ***B. fissistyla***
42. Largest capsule-wing higher than wide, only slightly wider than the smaller ones.
Indonesia: Celebes. 1913. [Fig. 28.13] .... ***B. strictipetiolaris***
New Guinea. 1948. [Fig. 33.15] .... ***B. brachyptera***
34. Inflorescence 4–6 times dichotomous.
43. Blades acuminate.
44. Placentas simple; stipules persistent; anthers linear. Brazil: São Paulo. [Fig. 20.26] .... ***B. nuda***
44. Placentas bilamellate.
45. Bracts persistent; stipules persistent, longer than the short, stout, upper internodes. Mexico. [Fig. 33.12] .... ***B. mazae***
45. Bracts deciduous.
46. Blade slightly oblique, the larger basal lobe covering the apex of the petiole. Peru. [Fig. 33.10] .... ***B. viridiflora***
46. Blade strongly oblique to transverse, the petiole not covered.
47. Petioles 2 cm long; anthers broadly elliptic, the connective much produced; pistillate tepals 5. Venezuela. [Fig. 30.50] .... ***B. laxa***
47. Petioles 5–15 cm long; anthers oblong truncate; pistillate tepals 2. Central America:

Costa Rica, Panama. [Fig. 32.27] .... ***B. multinervia***

43. Blades broadly rounded, or acute, or apiculate at apex.

48. Staminate tepals 11–15 mm long; anthers suboblong; pistillate tepals 2. Peru. [Fig. 21.21] .... ***B. bracteosa***

48. Staminate tepals 5–8 mm long.

49. Anthers elliptic; pistillate tepals 5 or possibly 4. Peru, Bolivia. [Fig. 30.43] .... ***B. altoperuviana***

49. Anthers sublinear or cuneate; pistillate flowers unknown. Peru .... ***B. pseudoglauca***

Subkey 34

1. Blades broadly rounded or acute or apiculate.

2. Margins doubly dentate or sublobate.

3. Inflorescence 4–6 times dichotomous.

4. Margin doubly dentate; largest capsule-wing wider than high. Madagascar. [Fig. 33.8] .... **?*B. baronii***

4. Margin sublobate with very broadly acute projections, otherwise entire or obscurely dentate. Brazil.

5. Largest capsule-wing wider than high. Bahia? [Fig. 32.4] .... ****B. valida***

5. Largest capsule-wing as high as wide; stems sulcate. Bahia, Espirito Santo. [Fig. 30.6] .... ***B. sylvatica***

3. Inflorescence 1–3 times dichotomous.

6. Stem short, exceeded by the petioles; inflorescence 1–2 times dichotomous.

7. Margin duplicate-dentate; stamens on a long column. India .... ***B. tribenensis***

7. Margin sublobate.

8. Larger blade-projections acute. China: Kweichow. [Fig. 32.12] ...... ***B. kouy-tcheouensis***

8. Larger blade-projections broadly rounded. Ecuador. [Fig. 4.13].......... **?*B. triramosa***

6. Stem long, exceeding the petioles.

9. Inflorescence once dichotomous.

10. Anthers linear; stem cylindric. West Indies.

11. Stem glabrous, branched; petioles glabrous. Haiti. [Fig. 34.1] .... ***B. exilis***

11. Stem rusty pilose, simple; petioles pilose. Cuba. [Fig. S38] .... ***B. lomensis***

10. Anthers obovate.

12. Placentas bilamellate. Argentina. [Fig. 28.33] .... ***B. micranthera***

12. Placentas simple. India. [Fig. 34.2] .... ***B. concanensis***

9. Inflorescence 2–3 times dichotomous.

13. Bracts large, persistent. Brazil: Mato Grosso. [Fig. 20.4] .... ***B. lindmanii***

13. Bracts minute or deciduous.

14. Blades sublobate with broad projections; bracts large, deciduous. Cultivation. Brazil? [Fig. 4.25] .... **?****B. platanifolia***

14. Blades duplicate-dentate.

15. Capsule-wings truncate, angled; bracts unknown, presumably deciduous. Cultivation. [Fig. 34.3] .... ***B. frigida***

15. Capsule-wings rounded.

16. Peduncles, branches, and pedicels elongate. East Africa: Nyassaland. [Fig. 31.13] .... ***B. nyassensis***

16. Peduncles, branches, and pedicels minimal. Ecuador, Peru. . . . . ***B. albomaculata***
2. Margins entire or regularly cut.
17. Inflorescence only once dichotomous.
18. Ovary 2-celled; stem tuberous at base; peduncles mostly shorter than the leaves.
19. Blades minutely lepidote beneath. Malaya. [Fig. 30.14] . . . . ***B. debilis***
19. Blades glabrous or sparsely pubescent beneath. Siam.
20. Blades concolorous, green above, red beneath. [Fig. 30.54] . . . . ***B. grantiana***
20. Blades pale-maculate above.
21. Largest capsule-wing not more than twice as high as wide, obtuse; blade densely and regularly ciliate. [Fig. 28.52] . . . . ***B. curtisii***
21. Largest capsule-wing more than twice as wide as high, narrowly subtriangular; blade glabrous or sparsely and irregularly ciliate. [Fig. 28.53] . . . . ***B. haniffii***
18. Ovary 3-celled.
22. Anthers obovoid; connective not produced; stem tuberous. India.
23. Stamens nearly free. [Fig. 34.2] . . . . ***B. concanensis***
23. Stamens on a long column . . . . ***B. tribenensis***
22. Anthers linear or oblong.
24. Stem simple, low; anther-connective slightly produced; blades thin. West Indies: Haiti. [Fig. 34.4] . . . . ?***B. glaberrima***
24. Stem shrubby with long branches; connective produced longer than the anther; blades thick. Colombia. [Fig. 16.11] . . . . ***B. extensa***
17. Inflorescence 2–6 times dichotomous.
25. Inflorescence 5–6 times dichotomous. Brazil.
26. Stem short, with stout internodes; blades densely pubescent beneath; peduncle ~40 cm long. Rio de Janeiro. [Fig. 10.3] . . . . ***B. acetosa***
26. Stem elongate, with long, slender internodes.
27. Placentas simple; blades soon glabrous beneath; bracts conspicuous. Rio de Janeiro. [Fig. 29.6] . . . . ***B. huegelii***
27. Placentas bilamellate; blades pilose beneath; bracts minute. Espírito Santo. [Fig. 30.44] . . . . ***B. admirabilis***
25. Inflorescence 2–4 times dichotomous.
28. Placentas simple. Brazil.
29. Blades bullate, their basal sinus suborbicular. São Paulo. [Fig. 34.5] . . . . ***B. moysesii***
29. Blades even, their basal sinus broadly V-shaped.
30. Blades broadly elliptic, about as long as the petioles. Cultivation. [Fig. 32.3] . . . . ****B. rutilans***
30. Blades oblong-elliptic, 2–3 times as long as the petioles. São Paulo. [Fig. 20.47] . . . . ***B. cornitepala***
28. Placentas bilamellate.
31. Anthers obtriangular. Siam. [Fig. 34.6] . . . . ***B. rimarum***
31. Anthers linear to oblong.
32. Internodes elongate, much longer than the petioles; connective much produced, setiform; capsule-appendages horn-like, equal; pistillate tepals 6. Colombia. [Fig. 32.21] . . . . ***B. ferruginea***
32. Internodes short and stout, much shorter than the petioles. West Indies: Santo Domingo. [Fig. 34.7] . . . . ?***B. azuensis***

1. Blades acuminate.

33. Margins doubly dentate or sublobate.

34. Inflorescence 3–6 times dichotomous.

35. Capsule-wings equal or lacking.

36. Placentas parietal; capsule-wings lacking. Indian Ocean: Mauritius, Comoro Islands. [Fig. 30.13] .... ***B. salaziensis***

36. Placentas central; capsule-wings present, equal.

37. Capsule-wings linear, minimal; stem stout. Java. [Fig. 4.16] .... ***B. multangula***

37. Capsule-wings triangular; stem slender. Brazil: Santa Catarina. [Fig. 32.2] .... ***B. parvistipulata***

35. Capsule-wings present, unequal.

38. Blades sublobate with broad major projections.

39. Stipules persistent, pectinate; stem densely pubescent. French Guiana. [Fig. 20.10] .... ***B. hirsuta***

39. Stipules deciduous, entire; stem glabrous. Eastern Brazil. [Fig. 4.17] .... ***B. reniformis***

38. Blades duplicate-dentate or undulate with narrow major projections.

40. Stipules persistent; blades duplicate-dentate. Brazil: Mato Grosso. [Fig. 20.4] .... ***B. lindmanii***

40. Stipules deciduous.

41. Smaller capsule-wings linear, many times narrower than the largest. Colombia, Venezuela. [Fig. 31.11] .... ***B. dichotoma***

41. Smaller capsule-wings well developed, half to two-thirds as wide as the largest. Lesser Antilles: St. Kitts. [Fig. 32.15] .... ***B. retusa***

34. Inflorescence 1–2 times dichotomous.

42. Stipules persistent.

43. Blades sublobate with broad major projections.

44. Capsule-wings equal, minimal; stem stout, simple. Java. [Fig. 4.16] .... ***B. multangula***

44. Capsule-wings unequal.

45. Anthers linear to oblong.

46. Stem densely pubescent; outer staminate tepals elliptic, broadly rounded; largest capsule-wing ascending, subfalcate. French Guiana. [Fig. 20.10] .... ***B. hirsuta***

46. Stem glabrous; outer staminate tepals broadly ovate, apiculate; largest capsule-wing spreading. Paraguay. [Fig. 30.8] .... ***B. fiebrigii***

45. Anthers obovoid.

47. Blade-lobes acuminate; tepals yellow. India .... ***B. flaviflora***

47. Blade-lobes broadly rounded or subacute; tepals white to roseate.

48. Stem elongate, much longer than the petioles. Argentina. [Fig. 28.33] .... ***B. micranthera***

48. Stem much shorter than the petiole of the single leaf. Siam. [Fig. 34.8] . ***B. incondita***

43. Blades duplicate-dentate or sinuate with narrow projections.

49. Ovary 2-celled; capsule nutant, its smaller wings linear. Prince's Island near Java. [Fig. 28.14] .... ***B. tenuifolia***

49. Ovary 3-celled.

50. Peduncles much longer than the leaves; bracts deciduous. West Indies.

51. Filaments united in a column. Haiti. [Fig. 34.1] .... ***B. exilis***

51. Filaments free.

52. Stamens 20–22. Haiti. [Fig. 30.26] . . . . ***B. brachypoda***

52. Stamens 8–16. Cuba. [Fig. 12.16] . . . . ***B. cubensis***

50. Peduncles about equaling the leaves or shorter.

53. Largest capsule-wing narrowly triangular.

54. Blades subtruncate to broadly rounded at base; capsule-wings nearly equal. Lesser Antilles: St. Vincent. [Fig. 26.20] . . . . ***B. vincentina***

54. Blades deeply cordate with overlapping lobes covering much of the sinus; capsule-wings distinctly unequal. West Africa: Kenya, Tanganyika. [Fig. 34.9] . ****B. johnstonii***

53. Largest capsule-wing broadly rounded.

55. Bracts persistent; outer staminate tepals broadly ovate. Brazil: Mato Grosso. [Fig. 20.4] . . . . ***B. lindmanii***

55. Bracts deciduous; outer staminate tepals oblong. Indonesia: Sumatra. [Fig. 34.10] . . . . ***B. laevis***

42. Stipules deciduous.

56. Capsule wingless; placentas parietal. Indian Ocean: Mauritius, Comoro Islands. [Fig. 30.13] . . . . ***B. salaziensis***

56. Capsule alate; placentas central.

57. Capsule 6-alate. Tropical West Africa: Gulf of Guinea: Annobon Island. [Fig. 27.35] . . . . ***B. annobonensis***

57. Capsule 3-alate.

58. Anthers linear to oblong.

59. Capsule ovate-oblong, its wings vertical, unequal. Brazil: São Paulo. [Fig. 31.17] . . . . ***B. reniformis***

59. Capsule broadly turbinate, its wings horizontal, equal. Colombia, Venezuela. [Fig. 30.41] . . . . ***B. trispathulata***

58. Anthers obovoid.

60. Blades sublobate.

61. Major projections broadly rounded. Mexico. [Fig. 28.23] . . . . ***B. boissieri***

61. Major projections broadly acute; filaments forming a column.

62. Blade ovate, transverse. Nepal, India, Burma. [Fig. 34.11] . . . . ***B. megaptera***

62. Blade broadly elliptic, slightly oblique. Mexico. [Fig. 12.20] . . . . . . ***B. rhodochlamys***

60. Blades duplicate-dentate.

63. Stem very short with a single leaf; filaments forming a long column. India . . . . ***B. tribenensis***

63. Stem tall with may leaves.

64. Pistillate tepals 3; capsule-wings subequal, narrow, decurrent. Mexico. [Fig. 30.42] . . . . ***B. oaxacana***

64. Pistillate tepals 5; capsule-wings very unequal, the largest much wider than high.

65. Staminate tepals broadly rounded. Sumatra. [Fig. 34.12] . . . . ***B. altissima***

65. Staminate tepals subacute. China: Taiwan. [Fig. S39] . . . . ***B. chitoensis***

33. Margins regularly cut or undulate with narrow projections or entire.

66. Capsule-wings nearly or quite equal or lacking.

67. Placentas parietal; capsule-wings lacking. Indian Ocean: Mauritius, Comoro Islands. [Fig. 30.13] . . . . ***B. salaziensis***

67. Placentas central; capsule-wings developed.

68. Pistillate tepals 3.

69. Capsule broadly turbinate with a slender column; wings horn-shaped; stem elongate. Venezuela. [Fig. 34.13] .... ***B. brevipetala***
69. Capsule ellipsoid or ovoid; wings flat, vertical; stem very short. Indonesia: Sumatra. [Fig. 24.7] .... ***B. caespitosa***
68. Pistillate tepals 5.
70. Inflorescence 1–2 times dichotomous; stipules deciduous, crenulate at apex; basal bracts connate; placentas bilamellate. Mexico. [Fig. 28.23] .... ***B. boissieri***
70. Infloresence 3 or more times dichotomous.
71. Blades entire; stipules persistent; placentas simple. Brazil: Rio de Janeiro. [Fig. 30.55] .... ***B. sanguinea***
71. Blades serrate; stipules deciduous; placentas bilamellate. India, Burma. [Fig. 34.14] .... ***B. roxburghii***
66. Capsule-wings distinctly unequal.
72. Inflorescence 3–6 times dichotomous.
73. Blades serrate.
74. Inflorescence 6 times dichotomous. Madagascar. [Fig. 33.8] .... ?***B. baronii***
74. Inflorescence 2–3 times dichotomous. Japan, China. [Fig. 12.21] .... ***B. grandis***
73. Blades entire or undulate.
75. Placentas simple. Brazil.
76. Blade undulate-dentate, its smaller lobe broadly acute. Rio de Janeiro. [Fig. 30.30] .... ***B. riedelii***
76. Blade coarsely crenate, its smaller lobe evenly rounded. São Paulo. [Fig. 20.47] .... ***B. cornitepala***
75. Placentas bilamellate. West Indies.
77. Blades non-ciliate. Trinidad. [Fig. 34.15] .... ***B. eciliata***
77. Blades ciliate. Lesser Antilles.
78. Capsule-wings acute, laxly nerved. Guadeloupe. [Fig. 32.35] .... ***B. odorata***
78. Capsule-wings subrounded, densely nerved. Dominica .... ***B. dominicalis***
72. Inflorescence 1–2 times dichotomous.
79. Stipules quickly deciduous.
80. Blades closely and sharply serrate. Japan, China. [Fig. 12.21] .... ***B. grandis***
80. Blades entire or undulate or laxly and weakly dentate.
81. Peduncle several times exceeding the leaves. West Indies: Haiti. [Fig. 34.4] .... ?***B. glaberrima***
81. Peduncles little if at all exceeding the leaves.
82. Petioles to 1 cm long; connective produced longer than the anther. Colombia. [Fig. 16.11] .... ***B. extensa***
82. Petioles much longer; anthers obovate, retuse.
83. Stem very short with a single leaf; blade shallowly cordate. India .... ***B. tribenensis***
83. Stem elongate with several leaves; blade deeply and narrowly cordate. Siam. [Fig. 34.16] .... ***B. siamensis***
79. Stipules more or less persistent.
84. Filaments free.
85. Blades elliptic-oblong; anthers linear; placentas simple. Brazil: São Paulo. [Fig. 20.47] .... ***B. cornitepala***
85. Blades ovate.

86. Blades subentire, obscurely dentate; smaller capsule-wings crescent-shaped. Indonesia: Sumatra. [Fig. 34.10] . . . . **B. laevis**

86. Blades distinctly sinuate-dentate; smaller capsule-wings linear. China: Taiwan. [Fig. S39] . . . . **B. chitoensis**

84. Filaments united to form a stalk or column.

87. Blades nearly as wide as long. Malaya. [Fig. 32.17] . . . . ?**B. longicaulis**

87. Blades nearly twice as long as wide; base tuberous. Siam.

88. Bracts red-nerved; ovary 2-celled. [Fig. 30.54] . . . . **B. grantiana**

88. Bracts concolorous.

89. Stipules 10 mm long, glabrous. [Fig. 34.6] . . . . **B. rimarum**

89. Stipules 5 mm long, sparsely pilose-ciliate. [Fig. 29.35] . . . . **B. socia**

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BEGONIACEAE, Part II: Annotated Species List

Jack Golding and Carrie E. Karegeannes

Introduction

The verified species and variety epithets, with the synonyms, are listed in alphabetical order for the present and superseded genera of the Begoniaceae.

This list evolved from *The Species of the Begoniaceae*, Fred A. Barkley, 1972, and *The Species of the Begoniaceae*, second edition, Fred A. Barkley and Jack Golding, 1974.

We are deeply indebted to Fred Barkley for his tremendous work compiling the species lists that were the foundation for this work.

Barkley's list is a compendium of published names and published synonomy. Most of the data for his entries came from *Index Kewensis*, the *Gray Herbarium Card Index*, and J. Doorenbos's Check List of Begonia Names, 1971, unpublished. Originally, the intent was merely to continue the revisions of the Barkley list that Jack Golding started for the 1974 second edition. It soon became evident that a new method of compiling the list was necessary, because many inaccuracies in the literature—of priority, spelling, and synonyms—have been transmitted throughout the years by authors copying the errors of previous authors.

In an effort to ensure the accuracy of this new listing, all the literature locatable has been examined to determine the original citation and to verify the correct spelling, author, and place of citation.

The authors who determined the synonomy are noted, and the names that were transferred through one or more interim "correct" names are recorded.

In the citation of authors, names, and literature, we have followed chapter 4, section 3, and the general recommendation on citation, section 4, of *The International Code of Botanical Nomenclature*, 1978, with some modification of typeface and punctuation.

The proposed form of citation of authors' names and the abbreviated short-titles of books are from Stafleu and Cowan, *Taxonomic Literature*, second edition: volumes 1, 1976; 2, 1979; 3, 1981; 4, 1983.

For periodicals, the adopted abbreviations in Lawrence, Buchheim, Daniels, and Dolezal, *Botanico-Periodcum-Huntianum*, 1968, are used.

The orthography of the names conforms to the rules and recommendations of the *International Code of Botanical Nomenclature*, 1978. Incorrect original spellings are within quotation marks, after the date of publication.

FORMAT

Citation of Correct Names

Begonia

aggeloptera N. Hallé, Adansonia, II, 12:371, pl. 8, 1972. Gabon. Fig. 14.54.

Jack Golding, American Begonia Society, 47 Clinton Avenue, Kearny, NJ 07032. Carrie E. Karegeannes, American Begonia Society, 3916 Lake Boulevard, Annandale, VA 22003.

agusanensis Merrill, Philipp. J. Sci., 6:377, "1911," 1912. Philippines. Fig. 20.33.

garagarana C. de Candolle, Smithsonian Misc. Collect., 69(12):2, 1919. Panama. Fig. 23.1.

Begonia	Genus name, centered in the column at the beginning of each generic section, combined with an epithet is the name of the taxon
aggeloptera agusanensis garagarana	Epithet of a correct name
N. Hallé Merrill C. de Candolle	Author, the person who first validly published the name (publishing author)
Adansonia Philipp. J. Sci. Smithsonian Misc. Collect.	Title of publication
II	Series number
12, 6, 69	Volume number
(12)	Part number, used only when the pages of each part are numbered separately
371, 377, 2	Page number
pl. 8	Published illustration number
"1911"	Date on title page, when different from date of effective publication
1972, 1912, 1919	Date of effective publication
Gabon Philippines Panama	Habitat
Fig. 14.54 Fig. 20.33 Fig. 23.1	Figure number for the illustration in "Part I: Illustrated Key"

Author Variations

andamensis Parish ex C.B. Clarke in J.D. Hooker, Fl. Brit. India, 2:650, 1879.

The name *B. andamensis* is attributed to ("ex" = from) Parish by the publishing author C.B. Clarke, who published the name in the works of J.D. Hooker, Fl. Brit. India.

boucheana (Klotzsch) A. de Candolle, Prodr., 15(1):373, 1864. Venezuela. Fig. 3.38.
Gurltia boucheana Klotzsch, 1856.

The epithet *boucheana* originally published by Klotzsch in the genus *Gurltia* was transferred to *Begonia* by the publishing author A. de Candolle.

adscendens sensu H. Hara, Fl. E. Himalaya, 2:83, 1971, non C.B. Clarke, 1890; in H. Ohashi, Fl. E. Himalaya, 3:85, 1975.
= leptoptera H. Hara, 1973.

The name *B. adscendens* sensu (according to) H. Hara, Fl. E. Himalaya, 2:83, 1971, was a misidentification and not *B. adscendens* C.B. Clarke, 1890. The error was later corrected by H. Hara in H. Ohashi, Fl. E. Himalaya, 3:85, 1975, where he identified the taxon as *B. leptoptera* H. Hara, 1973.

Synonyms and Illegitimate Names

albo-coccinea W.J. Hooker, Bot. Mag., vol. 71, pl. 4172, 1845. India. Fig. 2.22, icon.
wightiana Wallich, 1831.
grahamiana Wight, 1852.
Mitscherlichia albo-coccinea Klotzsch, 1854.
Mitscherlichia grahamiana Hasskarl, 1858.

After the citation of the correct name, the names of the synonyms, their authors, and dates of publication are listed in chronological order.

grahamiana Wight, Icon. Pl. Ind. Or., 5(2):9, pl. 1811, 1852.—A. de Candolle, Prodr., 15(1):389, 1864.
= albo-coccinea W.J. Hooker, 1845.

Begonia grahamiana Wight, 1852, was determined by A. de Candolle to be a synonym of *B. albo-coccinea* W.J. Hooker, 1845.

peltata Elmer, Leafl. Philipp. Bot., 7:2556, 1915, non Otto & Dietrich, 1841.—Merrill, Philipp. J. Sci. Bot., 13(1):39, 1918.
= elmeri Merrill, 1918.

Begonia peltata Elmer was a later homonym of *B. peltata* Otto & Dietrich, 1841; it was therefore illegitimate and required a new name. Merrill made this determination and gave it the new name *B. elmeri* Merrill.

calabarica Stapf, Bull. Misc. Inform., 20, 1906.—Fotsch, Begonian, 41, 1933 [= *modica* Stapf, 1908].—Engler, Veg. Erde, 9(3.2):617, 1921 [= *whytei* Stapf, 1905].—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:218, 1954.
= quadrialata Warburg var. quadrialata, 1895.

This is an example of a synonym transferred via interim names [in brackets]. Fotsch determined that *B. calabarica* Stapf, 1906, was *B. modica* Stapf, 1908, but earlier Engler had determined that *B. modica* Stapf, 1908, was *B. whytei* Stapf, 1905. Later Keay determined that *B. whytei* Stapf was *B. quadrialata* Warburg, 1895.

ciliato-bracteata Engler, Veg. Erde, 9(3.2):616, 1921, sphalmate pro cilio-bracteata Warburg, 1895.

Begonia ciliato-bracteata was listed by Engler, but it was a mistake for *B. cilio-bracteata* Warburg.

rupestris Moon ex Trimen, Fl. Ceylon, 2:263, 1894, pro syn. tenera Dryander, 1791.

Begonia rupestris Moon ex Trimen was listed without a description by Dryander as a synonym of *B. tenera* Dryander and is illegitimate.

standleyi Houghton ex Standley & Calderon, Lista Prelim. Pl. Salvad., 157, 1925, nomen nudum.

Begonia standleyi was listed by Standley and Calderon without a description and is therefore illegitimate, a nomen nudum.

Reference to Illustrations in the Key

Those valid species in the "Annotated Species List" that are illustrated can be cross referenced to the "Illustrated Key" (*Begoniaceae*, Part I) by the first part of the figure number (except for species with supplemental figures). For example, *Begonia aberrans* Irmscher, Fig. 14.23, is first keyed out in Subkey 14.

The figure number is that of the photograph of the holotype or type specimen, except when followed by one of these notations:

non typus	Not the type
icon	Illustration from plate in the original or subsequent citation

If no herbarium specimen or suitable illustration was available when the key was frozen, the citation is ended by "sine figura," without a figure; otherwise the citation of a correct name ends with the figure number.

aberrans Irmscher, Webbia, 9:483, 1953. Sumatra. Fig. 14.23.

If a suitable specimen of the correct name is not available, the illustration of a synonym is used. In this case, the figure number at the end of the correct name citation is in parentheses and is again listed, without parentheses, after the synonym.

pleiopetala A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:121, 1859. Peru. (Fig. 8.33.)
pusilla A. de Candolle, 1859. Fig. 8.33
warburgiana Hieronymus, 1895.

Also, if a suitable specimen of a correct name is not available, the illustration of a subspecies or different variety of that correct name may be used. The figure number at the end of the correct name is in parentheses and is listed without parentheses after the subspecies or different variety.

peninsulae Irmscher var. peninsulae, Mitt. Inst. Allg. Bot. Hamburg, 8:98, 1929. Malaya. (Fig. 2.33.)
peninsulae subsp. tambelanensis Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:100, 1929. Malaya. Fig. 2.33.

Additional Terms

Latin terms are used as in the *International Code of Botanical Nomenclature*, with a few additions. Certain phrases below, are defined here as an aid to the reader.

Descriptione inchoata
The description is unfinished, or imperfect or rudimen-

tary, and is insufficient for identification and placement in the key.

Editus sero pro clave

Published too late for key. The preceding citation was published too late for the information to be used for the key.

Gelata in clave

Frozen in the key. Production requirements made it necessary to freeze the figure numbers in the key long before the completion of the species list. This notation is followed by the changes that have become known later.

fide . . . in litteris

According to . . . , in correspondence, to indicate the source of an acceptable determination not previously published.

fide . . . in manuscriptum

According to . . . , in an unpublished manuscript.

fide . . . in schedula

According to . . . , written on the herbarium sheet.

non visus

The preceding citation has not been seen by the authors.

Obs.: e plantis cultis vidi fortasse species propria. J. G.

Observation by Jack Golding: From the plants I have seen in cultivation, this is possibly a distinct species.

sphalmate pro

By mistake for; the illegitimate name or a misspelled name was published by mistake (other than misidentification, indicated by "sensu") for the correct name that followed.

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We are indebted to many who have helped us with information in the preparation of this list, especially the following:

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Jack Golding's secretaries, Jeanette Ruggiero and Irene Greenhalgh, for their diligent typing and retyping of a long and difficult manuscript.

Begoniaceae Species List

Begonia

abaculoides Ziesenhenne, Begonian, 35:257, 1968; Begonian, 36:39, 1969.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:441, 1983.

= boissieri A. de Candolle, 1859.

abbottii Urban in Fedde, Repert., 18:192, 1922. Haiti. Fig. 30.22, non typus.

aberrans Irmscher, Webbia, 9:483, 1953. Indonesia: Sumatra. Fig. 14.23.

aborensis Dunn, Bull. Misc. Inform., 109, 1920. India: Himalaya. Fig. 23.21, non typus.

abyssinica Cufodontis, Senck. Biol., 41:382, pl. 64: fig. 9, 1960. Ethiopia. Fig. 27.28.

acaulis Merrill & Perry, J. Arnold. Arbor., 24:43, pl. 1,l–q, 1943. New Guinea. Fig. 23.3

acerifolia Humboldt, Bonpland & Kunth, Nov. Gen. Sp., 7, folio 142, quarto 186, pl. 644, 1825. Ecuador. Fig. 4.22, icon.

dolabrifera C. de Candolle, 1908.

aceroides Irmscher, Bot. Jahrb. Syst., 76:100, 1953. Siam. Fig. 5.26.

burkillii Irmscher 1929, non Dunn 1920.

acetosa Vellozo, Fl. Flum., vol. 10, pl. 50, "1827," 1831, icon; Arch. Mus. Nac. Rio de Janeiro, 5:406, 1881, desc. Brazil. Fig. 10.3, icon.

cantareira hort., 1950.

acetosella Craib var. acetosella, Bull. Misc. Inform., 153, 1912.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 6:347, 1927. Siam, China, Burma. Sine figura.

acetosella Craib var. hirtifolia Irmscher, Mitt. Inst. Allg. Hamburg, 10:515, 1939. China.

acida Vellozo, Fl. Flum., vol. 10, pl. 49, "1827," 1831, icon; Arch. Mus. Nac. Rio de Janeiro, 5:406, 1881, desc. Brazil. Fig. 10.4, icon.

ecuadoriensis hort. Buxton, 1932

brasiliensis Everett, 1939.

acida Martius ex A. de Candolle in Martius, Fl. Bras., 4(1):365, 1861, non Vellozo, 1831.—Irmscher, Bot. Jahrb. Syst., 78:183, 1959.

= subacida Irmscher, 1959.

aconitifolia A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:127, 1859; in Martius, Fl. Bras., 4(1):352, 1861. Brazil. Fig. 4.8.

sceptrum hort. ex Rodigas, 1884.

faureana Linden ex Garnier, 1895.

faureana var. *argentea* Linden, 1896.

aconitifolia 'Hildegard Schneider' Everett, J. New York Bot. Gard., 41:2, 6, pl., 1940.—Weber & Dress, Baileya, 16:59, 1968.

faureana var. *metallica* Rodigas, 1895.

aconitifolia 'Metallica' Weber & Dress, 1968.

aconitifolia 'Metallica' Weber & Dress, Baileya, 16:61, 1968.

= aconitifolia 'Hildegard Schneider' Everett, 1940.

acrensis Irmscher, Bot. Jahrb. Syst., 74:605, 1949.—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:114, 1955 [= *williamsii* Rusby & Nash, 1906; non × *williamsii* Williams, 1892].—L.B. Smith & B.G. Schubert, Revista Univ. (Cuzco), 33(87):84, 1944.

= wollnyi Herzog, 1909.

aculeata Walpers, Nov. Actorum Acad. Caes. Leop.-Carol, Nat. Cur., 16, suppl. 2(19, suppl. 1):409, 1843; Repert. Bot. Syst., 5:767, 1846.—A. de Candolle in Martius, Fl. Bras., 4(1):354, 1861.

= maculata var. argentea A. de Candolle, 1861.

acuminata Dryander, Trans. Linn. Soc., 1:166, pl. 14: figs. 5, 6, 1791.—O.E. Schulz in

Urban, Symb. Antil., 7:13, 1911.

= acutifolia Jacquin, 1787.

Obs.: e plantis cultis vidi fortasse species propria. J.G.

acuminatissima Merrill, Philipp. J. Sci., 6:395, "1911," 1912. Philippines. Fig. 26.22.

camiguinensis Elmer, 1915.

acutifolia Jacquin, Coll., 1:128, "1786," 1787.—W.J. Hooker, Bot. Mag., vol. 69, pl. 4025, 1843. Cuba, Jamaica. Fig. 29.19, icon.

Aceris fructu herba anomala, flore tetrapetalo albo Sloane, 1696.

acuminata Dryander, 1791.

hamiltoniana Lehmann, 1850.

malabarica sensu F. Hamilton ex Walpers, 1852, non Lamarck, 1785.

Platycentrum hamiltonianum Miquel, 1856.

Tittelbachia hamiltonianum Regel, 1860.

obliqua sensu Van den Heede, 1903, non Linnaeus, 1753.

acutifolia Swartz, Flor. Ind. Occ., 2:994, 1800, non Jacquin, 1787.—O.E. Schulz in Urban, Symb. Antil., 7:17, 1911 [= *purpurea* Swartz, 1788].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983.

= jamaicensis A. de Candolle, 1859.

acutifolia sensu Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 145, 1855; Begoniac., 25, 1855, non Jacquin, 1787.—A. de Candolle, Prodr., 15(1):295, 1864 [= *portoricensis* A. de Candolle, 1864].—O. E. Schulz in Urban, Symb. Antil., 7:8, 1911.

= decandra Pavon ex A. de Candolle, 1859.

acutifolia herb. Vindob. ex A. de Candolle in Martius, Fl. Bras., 4(1):380, 1861, non Jacquin, 1787; pro syn. dentatiloba A. de Candolle, 1859.

acutiloba Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 14, 1853.—emend. L.B. Smith and B.G. Schubert, Contr. Gray Herb., 161:28, pl. 3, 1946. Mexico, Guatemala. Fig. 4.37.

Knesebeckia acutiloba Klotzsch ex Walpers, 1859.

adenodes Irmscher, Webbia, 9:478, pl. 2, 1953. Borneo. Fig. 26.15.

adenopoda Lemaire, Jard. Fleur., 2(Misc.): 17, 1852.—A. de Candolle, Prodr., 15(1):353, 1864. Burma. Fig. 15.4.

verticillata W.J. Hooker, 1851, non Vellozo, 1831.

Lauchea verticillata Klotzsch, 1855.

adenostegia Stapf, Trans. Linn. Soc. London, Bot., II., 4:164, 1894. Borneo. Fig. 26.14.

adiantiformis Toledo, Arq. Bot. Estado. São Paulo, n.s. (form major), 2(3):62, pl. 17, 1946.—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):59, 1971.

= itatinensis Irmscher ex Brade, 1944.

admirabilis Brade, Arq. Jard. Bot. Rio de Janeiro, 10:136, pl. 6, 1950. Brazil. Fig. 30.44, icon.

adolfi-friderici Gilg in Mildbraed, Wiss. Erg. Deut. Zentr. Afr. Exp. Bot., 2:574, 1913. Congo. Fig. S14.

adscendens C.B. Clarke, J. Linn. Soc. Bot., 25:26, pl. 13, 1890. India: Himalaya. Fig. 8.4, icon.

adscendens sensu H. Hara, Fl. E. Himalaya, 2:83, 1971, non C.B. Clarke, 1890; in H. Ohashi, Fl. E. Himalaya, 3:85, 1975.

= leptoptera H. Hara, 1973.

aenea Linden & André, Linden Cat., 88:2, 1871, "*oenea*"; Gartenflora, 20:213, 1871. Assam. Discriptione inchoata.

aequata A. Gray, U.S. Expl. Exped. Phan., 15:658, 1854.—Merrill, Philipp, J. Sci., 3:84, pl. 4, 1908. Philippines. Fig. 14.35.

aequilateralis Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:134, pl. 7, 1929. Malaya. Sine figura.

aequatorialis L.B. Smith & B.G. Schubert, Lloydia, 13:85, pl., 1950. Ecuador. Fig. 8.29.

aeranthos L.B. Smith & B.G. Schubert, Mem. New York Bot. Gard., 8:36, pl. 2a–e, 1952. Ecuador. Fig. 3.27.

grandibracteolata Irmscher, 1953.

affinis Merrill, Philipp. J. Sci., 7:308, 1912. Philippines. Fig. 19.15.

aggeloptera N. Hallé, Adansonia, II, 12:371, pl. 8, 1972. West Africa: Gabon. Fig. 14.54.

agrial Rojas, Le Monde des Plantes, 74:24, 1913.—L.B. Smith & B.G. Schubert, Darwiniana, 5:101, 1941 [= cucullata Willdenow, 1805].—J. Golding, Phytologia, 50:335, 1982.

= cucullata var. spatulata J. Golding, 1982.

agusanensis Merrill, Philipp. J. Sci., 6:377, "1911," 1912. Philippines. Fig. 20.33.

alba Merrill, Philipp. J. Sci., 10:45, 1915. Philippines. Fig. 9.6.

alba-coccinea hort., Horticulturist, 1:378, 1847, non visus, sphalmate pro albo-coccinea W.J. Hooker, 1845.

albido-setulosa Hasskarl, Hort. Bogor. Descr., 313, 1858. Sine figura.

albidula Brade, Arq. Jard. Bot. Rio de Janeiro, 10:137, pl. 7, 1950. Brazil. Fig. 29.27, icon.

albiflora hort. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, pro syn. *Tittelbachia albiflora* Klotzsch, 1854; nomen nudum.

albobracteata Ridley, Trans. Linn. Soc. London, Bot., II, 9:60. 1916. New Guinea. Fig. 14.2.

albo-coccinea W.J. Hooker, Bot. Mag., vol. 71, pl. 4172, 1845. India. Fig. 2.22, icon.

wightiana Wallich, 1831.

grahamiana Wight, 1852.

Mitscherlichia albo-coccinea Klotzsch, 1854.

Mitscherlichia grahamiana Hasskarl, 1858.

albomaculata C. de Candolle in Huber, Bol. Mus. Paraense Hist. Nat., 4:593, 1906.—emend. L.B. Smith & D.C. Wasshausen, Phytologia, 54:465, 1984. Ecuador, Peru. Sine figura.

albo-picta W. Bull, Rare Plants Catalog, London, 210:13, 1885; Gartenflora, 35:402, 1886.—Irmscher, Pareys Blumengart., 79, 1960.—Thompson and Thompson, Begonia Guide, 3:R-8, 1976.—L.B. Smith & D.C. Wasshausen, Phytologia, 55:112, 1984. Brazil. Sine figura.

maculata Raddi var. *maculata* sensu L.B. Smith & D.C. Wasshausen, 1984, non Raddi, 1820.

alchemilloides Meisner ex A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:125, 1859; in Martius, Fl. Bras., 4(1):344, 1861. Brazil. Fig. 28.25

alemanii Brade, Rodriguesia, 18:30, pl. 1, 1945. Brazil. Fig. 17.24, icon.

alepensis A. Chevalier, Bull. Soc. France, 58 (Mem. 8d):174, "1911," 1912.—Wilczek, Fl. Congo, Rwanda, Burundi, 30, pl. 3, 1969. Tropical Africa. Sine figura.

poggei sensu De Wildeman, 1908, pro parte; non Warburg, 1894.

ealensis Irmscher, 1921, pro parte.

eminii sensu Hutchinson, Dalziel & Keay, 1954, pro parte; non Warburg, 1895.

algaia L.B. Smith & D.C. Wasshausen, Phytologia, 52:441, 1983. China. Fig. 5.29.

calophylla Irmscher, 1927, non Gilg, 1921.

alice-clarkiae Ziesenhenne, Begonian, 43:65, pl., 1976, "*alice-clarkae*." Mexico. Fig. 12.17.

aliciae C.E.C. Fischer, Bull. Misc. Inform., 247, 1939. India. Fig. 8.26.

alicida C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:637, 1879, "*alaecida*." India. Fig. 10.6.

allenii Standley, Ann. Missouri Bot. Gard., 25:830, 1938.—L.B. Smith & B.G. Schubert, Ann. Missouri Bot. Gard., 45:62, 1958.

= tonduzii C. de Candolle, 1896.

alnifolia A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:133, 1859.—L.B. Smith & B.G. Schubert, Caldasia, 4:180, pl. 14, 1946. Colombia. Fig. 16.12

alpina L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984. Malaya. Fig. 8.14

monticola Ridley, 1914, non C. de Candolle, 1908.

altamiroi Brade, Arq. Jard. Bot. Rio de Janeiro, 8:230, pl. 4, 1948. Brazil. Fig. 4.7, icon.

altissima Ridley, J. Fed. Malay States Mus., 8(4):39, 1917. Sumatra. Fig. 34.12.

altoperuviana A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:123, 1859. Peru, Bolivia. Fig. 30.43.

alvarezii Merrill, Philipp. J. Sci., Bot., 6:405, "1911," 1912. Philippines. Fig 22.39.

alveolata Yü, Bull. Fan. Mem. Inst. Biol., n.s., 1:121, 1948. China. Sine figura.

amoena Wallich, Num. List, 129, no. 3682, 1831, nomen nudum.—Wallich ex A. de Candolle, Prodr., 15(1):327, 1864.—H. Hara in H. Ohashi, Fl. E. Himalaya, 3:85, pl. 5d, 1975.

= dioica F. Hamilton ex D. Don, 1825.

ampla J.D. Hooker in Oliver, Fl. Trop. Afr., 2:574, 1871. Tropical Africa. Fig. 25.1.

duruensis De Wildeman, 1908.

anaimalaiensis Beddome, Madras J. Lit. Sci., III, 1:48, 1864. India. Fig. S28.

reniformis Beddome, 1861.

anamalayana Beddome, 1865.

anamalayana Beddome, Trans. Linn. Soc., 25:217, 1865.—J. Golding & C. Karegeannes, Phytologia, 54:493, 1984.

= anaimalaiensis Beddome, 1864.

anceps Irmscher, Notes Roy. Gard. Edinburg, 21:35, 1951. China. Fig. 9.22.

andamensis Parish ex C.B. Clarke in J.D. Hooker, Fl. Brit. India. 2:650, 1879. India, Andaman Island, Burma. Descriptione inchoata.

andersonii hort. Begonian, 16:104, pl. 5, 1949.—Weber & Dress, Baileya, 16:43, 1968, nomen nudem. India.

andina Rusby, Bull. New York Bot. Gard., 8:108, 1912. Bolivia. Fig. 29.31.

andreana Sprague, Trans. & Proc. Bot. Edinburgh, 22:433, 1905.—L.B. Smith & B.G. Schubert, Caldasia, 4:185, 1946.

= guaduensis var. andreana L.B. Smith & B.G. Schubert, 1946.

androrangensis Humbert, Bull. Mus. Hist. Nat. (Paris), III, 47:76, pl. 1, 1972. Madagascar. Fig. 24.1.

anemoniflora, Irmscher, Bot. Jahrb. Syst., 76:76, 1953. Peru. Fig. 1.5.

anemonoides Azara, Voy., 2:503, 1809.—Steudel, Nom. Bot., 1:104, 1821. Descriptione inchoata.

angilogensis Merrill, Philipp. J. Sci., 26:477, 1925. Philippines. Fig. 12 15.

angolensis Irmscher, Bot. Jahrb. Syst., 81:176, 1961.—emend. Fernandes, Bol. Soc. Brot., II, 44:10, pl. 4, 1970. Africa: Angola. Fig. 30.3.

angraënsis Brade, Arq. Serv. Florest., 2:22, pl. 2, 1943. Brazil. Fig. 13.9, icon.

angularis Raddi var. angularis, Mem. Mod., 18:407, 1820.—J.D. Hooker, Bot. Mag., vol. 128, pl. 7842, 1902. Brazil. Fig. 30.31.

hastata Vellozo, 1831.

Pritzelia zebrina Klotzsch, 1855.

zebrina hort. in Loudon, 1855.

crenulata Schott ex A. de Candolle, 1861.

angularis Raddi var. angustifolia A. de Candolle in Martius, Fl. Bras., 4(1):359, 1861. Brazil.

angulata Vellozo var. angulata, Fl. Flum., vol. 10, pl. 52, "1827," 1831, icon; Arch. Mus. Nac. Rio de Janeiro, 5:407, 1881, desc.—Wawra, Bot. Ergeb. Maxim. Bras., 51, pl. 47, 1866. Brazil. Fig. 30.20, icon.

reticulata Gardner, 1845.

Pritzelia angulata Klotzsch ex Wawra, 1866.

angulata Raddi var. campos-portoi Brade, Rodriguesia, 18:17, 1945. Brazil.

angulata Raddi var. serrana Brade, Rodriguesia, 18:17, 1945. Brazil.

angustifolia Blume, Enum. Pl. Javae, 1:97, 1827.—Koorders, Exkurs.-Fl. Java, 2: 651, 1912.

= isoptera Dryander ex J.E. Smith, 1790.

angustifolia Hemsley, Biol. Cent. Amer., Bot., 1:493, 1880 sphalmate pro angustiloba A. de Candolle, 1859.

angustilimba Merrill, J. Straits Branch Roy. Asiat. Soc., 86:334, 1922. Borneo. Fig. 18.22.

angustiloba A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:126, 1859. Mexico. Fig. 5.21, non typus.

dentata Pavon ex A. de Candolle, 1864.

bicolor S. Watson, 1887.

anisoptera Merrill, Philipp. J. Sci., 6:398, "1911," 1912. Philippines. Fig. 23.10.

anisosepala J.D. Hooker in Oliver, Fl. Trop. Afr., 2:576. 1871. Gabon. Fig. 2.14.

anjuanensis Humbert, Bull. Soc. Bot. France, 118:735, pl. 1: figs. 19–24, "1971," 1973.—emend. Humbert, Bull. Soc. Bot. France, 119:417, "1972," 1973. Comoros. Fig. 8.12.

ankaranensis Humbert, Bull. Soc. Bot. France, 118:735, pl. 2: figs. 8–12, "1971," 1973. Madagascar. Fig. 7.6.

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barbata Wallich ex A. de Candolle, 1864.

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Diploclinium apterum Miquel, 1856.

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dimidiata Vellozo, 1831. Fig. 17.6, icon.
Steineria pulchella Klotzsch, 1855.
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patens Grisebach ex A. de Candolle, 1861.

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Diploclinium areolatum Miquel, 1856.
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Diploclinium atrichum Miquel, 1858.

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monoptera Link & Otto, 1828.

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non hort. Vindob. ex Klotzsch, 1855, non Parish ex Kurz, 1873.

velutina hort. Berol ex Klotzsch, 1855.

Knesebeckia balmisiana Klotzsch, 1855.

Knesebeckia monoptera Klotzsch, 1855.

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peponifolia var. *beta* A.T. Brongniart ex F. Cels, 1842.

peponifolia hort. ex Schlechtendal, 1851.

Gireoudia barkeri Klotzsch, 1854.

Gireoudia macrophylla Klotzsch, 1854.

macrophylla hort. Berol. ex Klotzsch, 1855.

peponifolia hort. Berol. ex Klotzsch, 1855.

Gireoudia macrophylla var. *concolor* Klotzsch, 1855.

Gireoudia macrophylla var. *discolor* Klotzsch, 1855.

megaphylla A. de Candolle, 1859.

peponifolia Visiani ex A. de Candolle, 1864.

macrophylla Sessé & Mociño, 1890, non Lamarck, 1785.

macrophylla var. *concolor* J. Doorenbos ex F.A. Barkley & J. Golding, 1974.

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Knesbeckia biserrata Klotzsch, 1855.

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palmaris A. de Candolle, 1859.

crenatiflora A. de Candolle, 1864.

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bonus-henricus J.J. de Wilde, Meded. Landbougwhogeschool Wageningen, 80-19:409, pls. 5, 6, 1980. Tropical West Africa: Cameroon. Fig. S41.

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bosseri Keraudren, Fl. Madagascar, 144:32, pl. 8, 1983. Madagascar. Editus sero pro clave.

boucheana (Klotzsch) A. de Candolle, Prodr., 15(1):373, 1864. Venezuela. Fig. 3.38.

Gurltia boucheana Klotzsch, 1856.

bowerae Ziesenhenne var. bowerae, Begonian, 17:78, pl., 1950, *"boweri."* Mexico. Fig. 25.19.

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bowerae Ziesenhenne var. nigramarga Ziesenhenne, Begonian, 40:288, pl., 1973. Mexico.

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brachypoda O.E. Schulz in Urban, Symb. Antil., 7:15, 1911. Haiti. Fig. 30.26.

Begonia roseo flore, folio aurito, minor et *glabra* Plumier in Tournfort, 1700.

obliqua var. *beta* Linnaeus, 1753.

repens var. *beta* Lamarck, 1785.

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= hayatae Gagnepain, 1919.

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= acida Vellozo, 1831.

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= per-dusenii Brade, 1952.

brassii Merrill & Perry, J. Arnold. Arbor., 24:43, pl. 2a–f, 1943. New Guinea. Fig. 27.39.

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brevicyma A. de Candolle, Smithsonian Misc. Collect., 69(12):3, 1919. Panama. Fig. 24.12.

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brevipes Merrill, Philipp. J. Sci., 6:378, "1911," 1912. Philippines. Fig. 16.25.

brevipetala (A. de Candolle) Warburg in Engler & Prantl., Nat. Pflanzenfam., 3(6A):146, 1894. Venezuela. Fig. 34.13.

Casparya brevipetala A. de Candolle, 1859.

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bridgesii A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:132, 1859. Bolivia. Fig. 30.17.

cuninghamei Sprague, 1912.

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brongniartii Lemaire, Hort. Universel, 4:136, pl., 1843, in ic., *B. peltata* in text. Fig. S3.

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Smith & B.G. Schubert, Caldasia, 4:100, pl. 12, 1946. Venezuela to Peru. Fig. 18.19.

urticifolia hort. Berol. ex Klotzsch, 1854.
Pilderia urticifolia Klotzsch, 1855.
lantanifolia A. de Candolle, 1859.
pilderia A. de Candolle, 1864.
urticifolia Warburg, 1894.

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papillosa Lindley, 1841, non Graham, 1828.

bui-montana Yamamoto, J. Soc. Trop. Agric., 5:353, 1933. Formosa. Sine figura.

bulbifera hort. ex Steudel, Nom. Bot., 1:104, 1821, pro syn. *evansiana* Andrews, 1811; non Loddiges ex Otto & Dietrich, 1841.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939.

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bulbifera Loddiges ex Otto & Dietrich, Allg. Gartenzeitung, 9:59, 1841, sphalmate pro bulbillifera Link & Otto, 1831.

bulbillifera Link & Otto, Icon. Pl. Rar., 89, pl. 45, 1831. Mexico. Fig. 27.16.

bulbifera Loddiges ex Otto & Dietrich, 1841.
Knesebeckia bulbifera Klotzsch, 1854.
tuberosa Pavon ex A. de Candolle, 1864.

bulbillifera Moricand ex A. de Candolle, Prodr., 15(1):310, 1864, non Link & Otto, 1831; pro syn. gracilis var. martiana A. de Candolle, 1864.

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bullata J. Linden ex Van den Heede, Begonia, 163, 1903, nomen nudum. Mexico.

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burkei hort., Veitchs' Cat. 39, 1894, non visus. Burma. Descriptione inchoata.

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= aceroides Irmscher, 1953.

burle-marxii Brade, Arq. Jard. Bot. Rio de Janeiro,15:37, pl. 6: figs. 1–11, 1957. Brazil. Fig. 18.3.

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macgregorii W.W. Smith, 1914, non Merrill, 1912.

buseyi Burt-Utley, Brittonia, 34:189, pl. 1, 1982. Central America: Panama. Fig. 9.8.

buttonii Irmscher, Bot. Jahrb. Syst., 81:178, pl. 11: fig. 1, 1961. Africa: Natal. Fig. 5.19. Gelata in clave.

Hilliard in Ross, Fl. South Afr., 22:141, 1976.

= sutherlandii J.D. Hooker var. sutherlandii, 1868.

caespitosa Jack, Malay. Misc., 2(7):8, 1822. Indonesia: Sumatra. Fig. 24.7.

Diploclinium caespitosum Miquel, 1856.

caffra Meisner, Linnaea, 14:501, "1840," 1841.—A. de Candolle, Prodr., 15(1):384, 1864 [= *dregei* var. *caffra* A. de Candolle, 1864].—Irmscher, Bot. Jahrb. Syst., 81:136, pl. 4: fig. 1g–i, 1961.—Burtt., Notes Roy. Bot. Gard. Edinburgh, 32:274, 1973.

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= quadrialata Warburg var. quadrialata, 1895.

calcarea Ridley, J. Straits Branch Roy. Asiat. Soc., 46:260, 1906. Borneo. Sine figura.

calcicola Merrill, Philipp. J. Sci., 6:400, "1911," 1912. Philippines. Fig. 24.16.

calciphylla; hort. ex J. Houlston, Florist Fruitist Gard. Misc., 92, 1853, nomen nudum.

calderonii Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 8:27, 1930. Central America. (Fig. 2.41, icon.)

falcata L.B. Smith & B.G. Schubert, 1939. Fig. 2.41.

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calliantha Merrill & Perry, J. Arnold Arbor., 24:47, pl. 3a,b, 1943. New Guinea. Fig. 16.30.

calophylla Gilg ex Engler, Veg. Erde, 9(3.2):617, 1921. Cameroon. Sine figura.

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dielsiana Gilg, 1904, non Pritzel, 1900.

camiguinensis Elmer, Leafl. Philipp. Bot., 7:2553, 1915.—Merrill, Enum. Philipp. Fl., pl. 119, 1923.

= acuminatissima Merrill, 1912.

campos-portoana Brade, Arq. Jard. Bot. Rio de Janeiro, 13:85, pl. 9, 1954. Brazil. Fig. 3.42.

canaliculata Brade, Arq. Jard. Bot. Rio de Janeiro, 10:132, pl. 1, 1950.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:441, 1983.

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rubella Miquel, 1852, non F. Hamilton, 1825.

candicans Graham, Edinburgh New Philos. J., 185, 1827, non *Begonia* sed *Bignonia*.

candollei Ziesenhenne, Begonian, 36:35, pl., 1969. Mexico. Fig. 30.9.

cantareira hort., Begonian, 17:175, 258, 1950; Begonian, 19:180, 1952.

= acetosa Vellozo, 1831.

capanemae Brade, Arq. Jard. Bot. Rio de Janeiro, 13:73, pl. 2, 1954. Brazil. Fig. 31.21, icon.

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obliqua Linnaeus, 1771, non Linnaeus, 1753.

diptera Dryander, 1791.

capensis Blanco, Fl. Filip., 724, 1837.—Naves, Fl. Filip., ed. 3, 3:127, pl. 413, 1879.—Merrill, Philipp. J. Sci., 6:393, 1911.

= nigritarum Steudel, 1821.

capillipes Gilg, Bot. Jahrb. Syst., 34:96, 1904. Tropical Africa. Fig. 14.51.

capituliformis Irmscher, Bot. Jahrb. Syst., 50:354, 1913. Indonesia: Celebes. Fig. 27.31.

caraguatatubensis Brade, Arq. Jard. Bot. Rio de Janeiro, 13:87, pls. 10, 11, 1954. Brazil. Fig. 32.19.

cardiocarpa Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 13, 1853. Central America: Nicaragua. Fig. 22.23.
Gireoudia cardiocarpa Klotzsch, 1854.

cardiophora Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:104, pl. 2, 1929. Siam. Fig. 11.9.

cariocana Brade, Rodriguesia, 18:26, 1945, nomen nudum.—Brade ex L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, pl. 1, 1983. Brazil. Fig. 4.19.
riedelii var. *latifolia* Brade, 1845, nomen in eadem schedula cum cariocana.

carletonii Standley, J. Wash. Acad. Sci., 17:314, 1927. Central America: Panama. Fig. 26.17.

carnosa Teijsmann & Binnendijk, Epim. Lugd. Bat., 4, 1863, non visus. Indonesia: Moluccas. Fig. 25.3.
Diploclinium carnosum Teijsmann & Binnendijk, 1863.

carnosula Ridley, J. Fed. Malay States Mus., 4:20, 1909. Malaya. Fig. 12.24.

carolineifolia Regel, Gartenfl., 1:259, pl. 25, 1852, "*caroliniaefolia.*" Mexico, Guatemala. Fig. 5.2.
rotata Liebmann, 1853.
Gireoudia carolineifolia Klotzsch, 1854.
Gireoudia rotata Klotzsch, 1855.

carollina in F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:18, 1974, sphalmate pro corallina Carriere, 1875.

carpinifolia Liebmann var. carpinifolia, Vidensk. Meddel. Dansk Naturhist. Foren. Kjöbenhavn 1852, p. 20, 1853. Central America: Costa Rica, Panama. Fig. 20.23
Gireoudia carpinifolia Klotzsch, 1854.

carpinifolia Liebmann var. *rubro-involucrata* hort., Begonian, 8:122, 241 1946, nomen nudum. Costa Rica.

carrieae Ziesenhenne, Begonian, 43:132, pl., 1976. Mexico. Fig. S23.

casiguranensis Quisumbing & Merrill, Philipp. J. Sci., 37:172, 1928. Philippines. Fig. 21.34.

caslerima sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:18, 1974, sphalmate pro consobrina Irmscher, 1937.

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Tittelbachia castaneifolia Klotzsch, 1854.

castaneifolia hort. Boissier ex A. de Candolle in Martius, Fl. Bras., 4(1):377, 1861, "*castaneaefolia,*" pro syn. fruticosa A. de Candolle, 1861.

castaneifolia Schott in Sprengel sensu A. de Candolle in Martius, Fl. Bras., 4(1):377, 1861, pro syn. fruticosa A. de Candolle, 1861.—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):18, 1971, errore A. de Candollei, castaneifolia Schott in Sprengel, Syst., 4(App.):407, 1827, non *Begonia* sed *Othlis.*

castilloi Merrill, Philipp. J. Sci., 13:38, 1918. Philippines. Fig. 25.20.

cataractarum J. Braun & K. Schumacher, Mitth. Forschungsreisenden Gel. Deutsch, Schutzgeb., 2:167, 1889. West Tropical Africa. Sine figura.

catharinensis Brade, Rodriguesia, 18:31, pl. 3, 1945. Brazil. Fig. 30.39, icon.

cathayana Hemsley, Bot. Mag., vol. 134, pl. 8292, 1908. China. Fig. 12.13, icon.
bowringiana hort. Sandler, 1903.

cathcartii J.D. Hooker & Thomson, Il. Himal. Pl., pl. 13, 1855. India: Sikkim. Fig. 28.2.
Platycentrum cathcartii Klotzsch, 1855.
nemophila Kurz, 1877.

caudata Merrill, Philipp. J. Sci., 13:41, 1918. Philippines. Fig. 25.15.

caudilimba C. de Candolle, Smithsonian Misc. Collect., 69(12):9, 1919.—L.B. Smith & B.G. Schubert, Caldasia, 4(16):15, pl. 2. 1946.
= nelumbiifolia Schlechtendal & Chamisso, 1830.

cavaleriei Léveillé var. cavaleriei, Repert. Nov. Sp., 7:20, 1909. China. Fig. 3.21.
esquirolii Léveillé, 1912.

cavaleriei Levillé var. pinfaensis Léveillé, Repert. Nov. Sp., 7:20, 1909. China.

cavallyensis A. Chevalier, Bull. Soc. Bot. France, 58(Mem. 8d):176, "1911," 1912.—M.L. Thompson, Begonian, 44:295, 1977. West Africa, Ivory Coast. Descriptione inchoata.

eminii hort., 1967, non Warburg, 1895.

rubro-marginata sensu F.A. Barkley, 1974, non Gilg, 1904.

cavum Ziesenhenne, Begonian, 15:20, 1948. Mexico. Fig. 28.30.

cebadillensis Houghton in Standley & Calderon, Lista Prelim. Pl. Salvad., 156, 1925, nomen nudum.—Houghton ex L.B. Smith & B.G. Schubert, Contr. Gray Herb., 161:26, pl. 3, 1946. Central America. Fig. 27.5.

celebica Irmscher, Bot. Jahrb. Syst., 50:343, 1913: Bot. Jahrb. Syst., 50:573, pl. 4: fig. 25a,b, 1914. Indonesia: Celebes. Fig. 28.4.

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scandens Vellozo, 1831, non Swartz, 1788.

chaetocarpa Kuntze var. chaetocarpa, Revis. Gen. Pl., 3(12):105, 1898. Bolivia. Fig. 19.23.

chaetocarpa Kuntze var. glabriflora L.B. Smith & B.G. Schubert, Revista Univ. (Cuzco), 33(87):76, 1944. Bolivia.

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= per-dusenii Brade, 1952.

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chepoensis C. de Candolle, Smithsonian Misc. Collect., 69(12):8, 1919.—L.B. Smith & B.G. Schubert, Ann. Missouri Bot. Gard., 45:56, 1958.

= filipes Bentham, 1844.

chevalieri Warburg ex A. Chevalier, Bull. Soc. Bot. France, 58(Mem. 8d):177, "1911," 1912. Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:219, 1954.

= rostrata Welwitsch ex J.D. Hooker var. rostrata, 1871.

chevalieri sensu Exell, J. Bot., 67, suppl., 1:197, 1929, non Warburg ex Chevalier, 1911.—Fernandes, Bol. Soc. Brot., II, 44:10, pls. 5, 6, 1970.

= rostrata var. brachyptera Fernandes, 1970.

chimborazo hort., Begonian, 17:18, 1950, nomen nudum. Guatemala.

chingii Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:519, 1939. China. Fig. 8.40.

chiriquensis Standley, Ann. Missouri Bot. Gard., 27:321, 1940.—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.

= urticae Linnaeus f. var. urticae, 1781.

chiriquina C. de Candolle, Smithsonian, Misc. Collect., 69(12):8, 1919.—L.B. Smith & B.G. Schubert, Ann. Missouri Bot. Gard., 45:66, 1958.

= seemanniana A. de Candolle, 1859.

chitoensis Liu & Lai, Fl. Taiwan, 3:793, pl. 820, 1977. China: Taiwan. Fig. S39.

chivatoa Ziesenhenne, Begonian, 17:54, pl. 1950. Mexico. Fig. 4.32.

chlorolepis L.B. Smith & B.G. Schubert, Caldasia, 4:16, pl. 3, 1946. Colombia. Fig. 17.1

chlorosticta Sands, Bot. Mag., n.s., vol. 183(4), pl. 827, 1982. Borneo. Editus sero pro clave.

ciliata Humboldt, Bonpland & Kunth, Nov. Gen. Sp., vol. 7, folio 136, quarto 178, 1825.—A. de Candolle in Martius, Fl. Bras., 4(1):344, 1861.

= hirtella Link var. hirtella, 1822.

ciliata Humboldt, Bonpland & Kunth var. *nana* Klotzsch ex A. de Candolle in Martius, Fl. Bras., 4(1):345, 1861, pro syn. hirtella var. nana A. de Candolle, 1861.

ciliata Pavon ex A. de Candolle, Prodr., 15(1):331, 1864, non Humboldt, Bonpland & Kunth, 1825; pro syn subcilliata A. de Candolle var. subcilliata, 1864.

ciliata hort. ex Steudel, Nom. Bot., ed. 2, 1:193, 1840, non Humboldt, Bonpland & Kunth, 1825; pro syn. *insignis* Graham, 1829.—Walpers, Repert. Bot. Syst., 2:213, 1843.

= incarnata Link & Otto var. incarnata, 1829.

ciliato-bracteata Engler, Veg. Erde, 9(3.2):616, 1921, sphalmate pro cilio-bracteata, Warburg, 1895.

cilibracteola C. de Candolle, Smithsonian Misc. Collect., 69(12):5, 1919.—L.B. Smith & B.G. Schubert, Ann. Missouri Bot. Gard., 45:57, 1958 [= *fischeri* var. *tovarensis* Irmscher, 1953].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:466, 1984.

= fischeri Schrank var. fischeri, 1820.

ciliifera Merrill, Philipp. J. Sci., 6:376, "1911," 1912. Philippines. Fig. S18.

cilio-bracteata Warburg, Bot. Jahrb. Syst., 22:40, 1895. Ghana to Congo. Fig. 22.6.

subfalcata De Wildeman, 1908.

cincinnifera Irmscher, Webbia, 9:494, pl. 5, 1953. Borneo. Fig. 21.49.

cinnabarina W.J. Hooker, Bot. Mag., vol. 75, pl. 4483, 1849. Bolivia. Fig. 29.2, icon.

aurantiaca hort. ex Planchon, 1849.

circumlobata Hance, J. Bot., 21:203, 1883. China. Fig. 4.46.

cirrosa L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, 1983. China. Sine figura.

crispula Yü ex Irmscher, 1951, non Brade, 1950.

cladocarpa Baker, J. Bot., 20:113, 1882.—M. Keraudren-Aymonin, Fl. Madagascar, 144:97, pl. 30, 1983. Madagascar. Fig. 4.51.

cladocarpoides Humbert ex Aymonin & Bosser, Fl. Madagascar, 144:82, pl. 25: figs. 4–6, 1983. Madagascar. Editus sero pro clave.

clarkei J.D. Hooker, Bot. Mag., vol. 93, pl. 5675, 1867.—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13: 186, 1941 [= *cinnabarina* W.J. Hooker, 1849].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:466, 1984, nomen legitimum. Peru, Bolivia. Fig. 28.32.

clarkei sensu Rusby, Mem. Torry Bot. Club, 6:43, 1896, sphalmate pro veitchii J.D. Hooker, 1867.

clavicaulis Irmscher, Mitt. Inst. Allg. Bot. Hamberg, 10:500, 1939. China. Fig. 29.14.

clemensiae Merrill & Perry, J. Arnold Arbor., 29:161, 1948. New Guinea. Fig. 6.12.

clivalis Ridley, J. Asiat. Soc. Straits, 54:43, 1910, non visus.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:144, pls. 8,9, 1929.

= sinuata var. clivalis Irmscher, 1929, pro parte.

= martabanica var. pseudoclivalis Irmscher, 1929, pro parte.

clypeifolia J.D. Hooker in Oliver, Fl. Trop. Afr., 2:576, 1871. Gabon. Fig. 2.13.

cobana C. de Candolle, Bull. Herb. Boissier, II, 8:322, 1908.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:181, 1961 [= *sartorii* Liebmann, 1853].—A. de Candolle, Prodr., 15(1):337, 1864.

= sarcophylla Liebmann, 1853.

coccinea W.J. Hooker, Bot. Mag., vol. 69, pl. 3990, 1843. Brazil. Fig. 30.40, icon.

Pritzelia coccinea Klotzsch, 1854.

rubra hort. ex Irmscher, 1960.

coccinea var. *Comte Alfred de Limering* Regel, Gartenflora, 17:194, 1868.—Irmscher, Bot. Jahrb. Syst., 76:29, 1953 [= *limmingheana* Morren, 1866].—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego)14, 1971 [= *procumbens* Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

coccinea var. *A. de Liming* Regel, Gartenflora, 17:191, pl. 584, 1868.—Irmscher, Bot. Jahrb. Syst., 76:29, 1953 [= *limmingheana* Morren, 1866].—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):14, 1971 [= *procumbens* Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

coccinea Ruiz & Pavon ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 247, 1855;

Begoniac., 127, pl. 11C, 1855, pro syn. *Casparya hirta* Klotzsch, 1855; non W.J. Hooker, 1843.—A. de Candolle, Prodr., 15(1):273, 1864 [= *Casparya cordifolia* var. *hirta* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Publ. Field Mus. Nat. Hist., Bot. Ser., 13:192, 1941, pro parte.

= hirta L.B. Smith & B.G. Schubert var. hirta, 1941.

coccinea Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 248, 1855; Begoniac., 128, 1855, pro syn. *Casparya coccinea* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya columnaris* var. *glabra* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:33, 1946, pro parte.

= urticae Linnaeus f. var. urticae, 1781.

cognata Irmscher, Webbia, 9:477, 1953. Borneo. Fig. 28.61.

collaris Brade, Bot. Mus. Nac. Rio de Janeiro, Bot., 1:14, pl. 5, 1944. Brazil. Fig. 29.28, icon.

collina Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:135, 1929. Malaya. Fig. 13.18.

collisiae Merrill, Philipp. J. Sci., 14:424, 1919. Philippines. Fig. 4.30.

colombiana L.B. Smith & B.G. Schubert, Caldasia, 4:29, pl. 6, 1946.—L.B. Smith & D.C. Wasshausen, Phytologia, 44:242, 1979 [= longirostris Bentham, 1845].—L.B. Smith & D.C. Wasshausen, Phytologia, 55:112, 1984, nomen legitimum. Colombia. Fig. 14.40.

colorata Warburg in Perkins, Fragm. Flor. Philipp., 51, 1904. Philippines. Fig. 25.6.

columnaris Bentham, Pl. Hartw 131, 1844.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya columnaris* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:33, 1946.

= urticae Linnaeus f. var. urticae, 1781.

columnaris Bentham var. *glabra* (A. de Candolle) L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:187, 1941; Caldasia, 4:34, 1946.

= urticae Linnaeus f. var. urticae, 1781.

columnaris herb. Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854, pro syn. *Casparya columnaris* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):273, 1864 [= *Casparya cordifolia*, 1864].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:192, 1941.

= hirta L.B. Smith & B.G. Schubert var. hirta, 1941.

columnaris Pavon in herb. Boissier ex A. de Candolle, Prodr., 15(1):274, 1864, pro syn. *Casparya columnaris* var. *glabra* A. de Candolle, 1864.—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:187, 1941 [= *columnaris* var. *glabra* L.B. Smith & B.G. Schubert, 1941]; Caldasia, 4:34, 1946.

= urticae Linnaeus f. var. urticae, 1781.

comata Kuntze, Revis. Gen. Pl., 3(2):105, 1898. Bolivia. Fig. 20.25.

comorensis Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):139, 1894, nomen nudum; Bot. Jahrb. Syst., 22:38, 1895.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:466, 1984 [= *salaziensis* var. *comorensis* L.B. Smith & D.C. Wasshausen, 1984]. Comoros. Gelata in clave.

M. Keraudren-Aymonin, Fl. Madagascar, 144:98, pl. 31, 1983, nomen legitimum. Editus sero pro clave.

Meziera salaziensis var. *comorensis* A. de Candolle, 1864.

seychellensis Hemsley, 1916.

salaziensis Gaudichaud var. *comorensis* L.B. Smith & D.C. Wasshausen, 1984.

compacticaulis Irmscher, Bot. Jahrb. Syst., 74:612, 1949.—L.B. Smith & D.C. Wasshausen, Phytologia, 44:244, 252, pl. 5, 1979. Ecuador. Fig. 1.4, non typus.

griseocaulis sensu L.B. Smith & B.G. Schubert 1952, pro parte, non Irmscher, 1949.

comperei Wilczek, Bull. Jard. Bot. Nat. Belg., 39:92, 1969. Congo. Fig. 22.8.

complicata (Hasskarl) A. de Candolle, Prodr., 15(1):399, 1864. Descriptione inchoata.
Tittelbachia complicata Hasskarl, 1858.
ottonis hort. Bogor. ex A. de Candolle, 1864.

compta Bull, Cat., 7, 1886, non visus. Brazil.

concanensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:126, 1859. India. Fig. 34.2.

conchifolia Dietrich var. conchifolia, Allg. Gartenzeitung, 19:258, 1851, "*conchaefolia.*" Central America: Costa Rica, Panama. Fig. 2.2, non typus.
scutellata Liebmann, 1853.
Gireoudia conchifolia Klotzsch, 1854.
Gireoudia conchifolia var. *scutellata* Klotzsch, 1855.
Gireoudia conchifolia var. *warscewicziana* Klotzsch, 1855.
Gireoudia warscewicziana hort. ex Klotzsch, 1855.
pumilo Standley, 1940, non Irmscher, 1929.

conchifolia Dietrich var. rubrimacula J. Golding, Begonian, 40:173–179, 188–190, 1973. Costa Rica.
'Zip' hort., 1959.

concinna Schott in Sprengel, Syst. Veg., 4(App.):408, 1827. Brazil. Fig. 2.44, non typus.
peltata A. de Candolle, 1859, non Otto & Dietrich, 1841.

confertiflora Gardner, Lond. J. Bot., 4:134, 1845.—A. de Candolle in Martius, Fl. Bras., 4(1):378, 1861.
= arborescens var. confertiflora A. de Candolle, 1861.

confinis L.B. Smith & D.C. Wasshausen, Phytologia, 53:297, pl. 2, 1983. Venezuela. Fig. 18.24.

confusa L.B. Smith & B.G. Schubert, Contr. Gray Herb., 161:27, pl. 3, 1946. Central America: Guatemala. Fig. 9.24.

congesta Ridley, J. Straits Branch Roy. Asiat. Soc., 46:253, 1906. Sarawak. Fig. 16.21.

conraui Gilg, Bot. Jahrb. Syst., 34:87, 1904.—Engler, Veg. Erde, 9(3.2):614, 1921.
= oxyloba Welwitsch ex J.D. Hooker, 1871.

consanguinea Merrill, Sarawak Mus. J., 3:531, 1928. Sarawak. Fig. 18.10.

consobrina Irmscher, Biblioth, Bot., 116:111, 1937. Ecuador. Fig. 20.6.

contracta Warburg in Perkins, Fragm. Flor. Philip., 54, 1904. Philippines. Fig. 21.51.
sorsogonensis Elmer ex Merrill, 1923.

convallariodora C. de Candolle, Bot. Gaz., 20:538, 1895. Mexico, Central America. Fig. 20.30.

convolvulacea (Klotzsch) A. de Candolle in Martius, Fl. Bras., 4(1):367, 1861. Brazil. Fig. 26.21, non typus.
geniculata Vellozo, 1831, non Jack, 1822.
rugosa hort ex Klotzsch, 1854.
Wageneria rugosa Klotzsch, 1854.
scandens hort. Schoenbrun ex Klotzsch, 1855.
Wageneria convolvulacea Klotzsch, 1855.
Wageneria schottiana Klotzsch, 1855.
repens Schott ex A. de Candolle 1864, non Lamarck, 1785.
unialata C. de Candolle, 1901.

cooperi C. de Candolle, Bot. Gaz., 20:539, 1895. Central America: Costa Rica. Fig. 17.13.

copelandii Merrill, Philipp. J. Sci., 6:401, "1911," 1912. Philippines. Fig. 26.19.

copeyana C. de Candolle, Bull. Herb. Boissier, II, 8:316, 1908. Costa Rica. Fig. 22.14.

corallina Carriere, Rev. Hort., 47:89, 1875. Brazil. Fig. 30.49, non typus.

cordata Vellozo, Fl. Flum., vol. 10, pl. 34, "1827," 1831, icon; Arch. Mus. Nat. Rio de Janeiro, 5:403, 1881, desc. Brazil. Fig. 24.2, icon.

cordifolia (Wight) Thwaites var. cordifolia, Enum. Pl. Zeyl., 129, 1859. India, Ceylon. Fig. 8.6, icon.
Diploclinium cordifolium Wight, 1852.

cordifolia Thwaites var. insularis A. de Candolle, Prodr., 15(1):329, 1964. Ceylon.

cordifolia Thwaites var. *hirta* in Buxton Check List Begonias, 42, 1957, sphalmate; nomen nudum.

cordifolia sensu Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, pl. 48F, 1894, non A. de Candolle, 1864.—L.B. Smith and B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:192, 1941.

= hirta var. cordifolia L.B. Smith & B.G. Schubert, 1941.

coriacea Hasskarl, Cat. Hort. Bogor. Alt., 192:311, 1844; Pl. Jav. Rar., 239, 1848; Hort. Bogor. Descr., 328, 1858. Java. (Fig. 2.30, icon.)

peltata Hasskarl, 1843, non Otto & Dietrich, 1841.

hasskarlii Zollinger & Mortizi, 1846.

hernandiifolia W.J. Hooker, pl. 4676, 1852. Fig. 2.30.

umbilicata hort. ex Planchon, 1853.

hernandiifolia sensu Seemann, 1854.

Mitscherlichia coriacea Klotzsch, 1855.

Mitscherlichia junghuhniana Miquel, 1856.

junghuhniana Miquel, 1857.

junghuhniana f. *acutifolia* Miquel ex Koorders, 1912.

coriacea A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:122, 1859, non Hasskarl, 1844; Prodr., 15(1):286, 1864.—J. Golding, Phytologia, 47:295, 1981.

= tominana J. Golding, 1981.

coriacea sensu Grisebach, Abh. Ges. Wiss. Gottingen, 24:136, 1879, non Hasskarl, 1844 [= *hieronymi* Lindau, 1894].—L.B. Smith & B.G. Schubert, Darwiniana, 5:96, pl. 7, 1941.

= micranthera var. hieronymi L.B. Smith & B.G. Schubert, 1941.

cornitepala Irmscher, Bot. Jahrb. Syst., 76:41, 1953. Brazil. Fig. 20.47.

cornuta L.B. Smith & B.G. Schubert, Caldasia, 4:25, pl. 5, 1946. Colombia. Fig. 30.46.

coronensis Merrill, Philipp. J. Sci., 26:480, 1925. Philippines. Fig. 8.48.

corredorana C. de Candolle, Candollea, 2:227, 1925. Central America: Costa Rica. Fig. 32.31.

corzoensis Ziesenhenne, Begonian, 38:55, pl., 1971. Mexico. Fig. 2.34.

coursii Humbert ex Keraudren, Fl. Madagascar, 144:66, pl. 18: figs. 9–14, 1983. Madagascar. Editus sero pro clave.

cowellii Nash, Addisonia, 1:9, pl. 5, 1916. Cuba. Fig. 5.24.

crassicaulis Lindley, Bot. Reg., 28, pl. 44, Misc. 22, 1842. Guatemala. Fig. 1.1

Gireoudia crassicaulis Klotzsch, 1854.

crassicaulis (A. de Candolle) Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):149, 1894, non Lindley, 1842.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, 1983.

= pachyrachis L.B. Smith & D.C. Wasshausen, 1983.

crassipes Gilg ex Engler, Veg. Erde, 9(3.2):619, 1921. Cameroon. Fig. 14.17.

crassirostris Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:513, 1939. China. Fig. 30.53.

crassisetulosa sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2, 24, 1974, sphalmate pro *laciniata* subsp. *crassisetulosa* Irmscher, 1939.

crateris Exell, Cat. Vasc. Pl. S. Tomé, 189, pl. 9A, 1944.—Ferreira, Garcia de Orta, 13:533, 1965.

= baccata J.D. Hooker, 1866.

crenata Dryander, Trans. Linn. Soc., 1:162, pl. 14: fig. 3, 1791. India. Fig. 8.18, icon.

minima Beddome, 1861.

Sauria crenata Hasskarl, 1855.

crenata sensu Maycock, Fl. Barbad., 357, 1830, non Dryander, 1791.—Schulz in Urban, Symb. Antil., 7:22, 1911 [= *macrophylla* Lamarck, 1785, probabiliter sensu Schulz].—J. Golding, Phytologia, 44:246, 1980.

= obliqua Linnaeus var. obliqua, 1753.

crenata Fischer ex Walpers, Repert. Bot. Syst., 2:217, 1843, pro syn. *finlaysoniana* Wallich, 1831.

crenatiflora (Klotzsch & Putzeys) A. de Candolle, Prodr., 15(1):306, 1864.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:466, 1984.

= biserrata Lindley var. biserrata, 1847.

crenatifolia Hemsley, Biol. Cent. Amer., Bot., 1:494, 1880, sphalmate pro *crenatiflora* A. de Candolle, 1864.

crenulata Schott ex A. de Candolle in Martius, Fl. Bras., 4(1):358, 1861, pro syn. angularis Raddi var. angularis, 1820.

crinita Oliver ex J.D. Hooker, Bot. Mag., vol. 97, pl. 5897, 1871. Bolivia. Fig. 29.3, icon.

crispipila Elmer, Leafl. Philipp. Bot., 2:737, 1910. Philippines. Fig. 21.42.

crispula Brade, Arq. Jard. Bot. Rio de Janeiro, 10:134, pls. 3, 4, 1950. Brazil. Fig. 7.12, icon.

crispula Yü ex Irmscher, Notes Roy. Bot. Gard. Edinburgh, 21:38, 1951, non Brade, 1950.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, 1983.
= cirrosa L.B. Smith & D.C. Wasshausen, 1983.

cristata Warburg ex Koorders, Natuurw. Tijdschr. Ned. Indie, 63:90, 1904, nomen nudum.—Warburg ex L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, pl. 2, 1983. Indonesia: Celebes. Fig. 27.24.

cristobalensis Ziesenhenne, Begonian, 38:82. pl., 1971. Mexico. Fig. 22.16.

croatii Burt-Utley, Brittonia, 34:196, pl. 5, 1982. Panama. Fig. 25.22, icon.

cruenta Graham ex Steudel, Nom. Bot., ed. 2, 1:193, 1840, nomen nudum.

cryptocarpa L.B. Smith & B.G. Schubert, Caldasia, 4:90, pl. 10, 1946. Colombia. Fig. 30.47.

cuatrecasasiana L.B. Smith & B.G. Schubert, Caldasia, 4:104, pl. 13, 1946, "*cuatrecasana.*" Colombia. Fig. 16.18.

cubensis Hasskarl, Hort. Bogor. Descr., 342, 1858. West Indies: Cuba. Fig. 12.16.
cubincola A. de Candolle, 1859.
lindeniana A. de Candolle, 1859.
plagioneura Milne-Redhead, 1930.

cubincola A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:124, 1859.—O.E. Schulz in Urban, Symb. Antil., 7:12, 1911.
= cubensis Hasskarl, 1858.

cubincola var. sensu Grisebach, Cat. Pl. Cub., 117, 1866.—O.E. Schulz in Urban, Symb. Antil., 7:17, 1911.
= wrightiana A. de Candolle, 1859.

cucullata Willdenow var. cucullata, Sp. Pl., 4:414, 1805.—J. Golding, Phytologia, 50:330, 1982. Brazil. Fig. 12.25, non typus.
semperflorens Link & Otto, 1828.—Loddiges, 1829.—Graham, 1829. Hooker, 1829.—Reichenbach, 1830.
dispar Reichenbach, 1829.
setaria hort. anglicis ex Graham, 1829.
sellovii hort. ex Hooker, 1829.
hookeri Sweet, 1830.
sellowii Klotzsch, 1855.
cucullifolia Hasskarl, 1858.
sellowii hort. anglicis ex A. de Candolle, 1861.
semperflorens var. *hookeri* A. de Candolle, 1861.
semperflorens var. *sellowii* A. de Candolle, 1861.
paludicola C. de Candolle, 1914.
cucullata var. *hookeri* L.B. Smith & B.G. Schubert, 1941.

cucullata Willdenow var. spatulata (Loddiges) J. Golding, Phytologia, 50:350, 1982. Brazil.
spatulata Loddiges, 1818; Haworth, 1819.
spatulata Hornemann, 1819.
cuneata Walpers, 1843.
nervosa Desfontaines ex Klotzsch, 1854.
cucullata sensu Klotzsch, 1855.
cucullata sensu A. de Candolle, 1861.
agrial Rojas, 1913.
cucullata var. *typica* sensu L.B. Smith & B.G. Schubert, 1941.

cucullata Willdenow var. arenosicola (C. de Candolle) L.B. Smith & B.G. Schubert, Darwiniana, 5:106, 1941.—J. Golding, Phytologia, 50:350, 1982. Argentina, Paraguay.
cucullata sensu Bettfreund, 1900.
subcucullata C. de Candolle, 1903.
subcucullata var. *arenosicola* C. de Can-

dolle, 1903.

cucullata Willdenow var. *typica* sensu L.B. Smith & B.G. Schubert, Darwiniana, 5:101, 1941.—J. Golding, Phytologia, 50:350, 1982.

= cucullata var. spatulata J. Golding, 1982.

cucullata Willdenow var. *hookeri* (A. de Candolle) L.B. Smith & B.G. Schubert, Darwiniana, 5:104, 1941.—J. Golding, Phytologia, 50:347, 1982.

= cucullata Willdenow var. cucullata, 1805.

cucullata Ruiz ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 254, 1855; Begoniac., 134, 1855, pro syn. *Sassea glabra* Klotzsch, 1854.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya columnaris* var. *glabra* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.

= urticae Linnaeus f. var urticae, 1781.

cucullata sensu Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 147, 1855; Begoniac., 27, 1855.—J. Golding, Phytologia, 50:349, 1982.

= cucullata var. spatulata J. Golding, 1982.

cucullata sensu A. de Candolle in Martius, Fl. Bras., 4(1):342, 1861.—J. Golding, Phytologia, 50:349, 1982.

= cucullata var. spatulata J. Golding, 1982.

cucullata sensu Bettfreund, Fl. Argentina, 2:94, pl. 58, 1900.—J. Golding, Phytologia, 50:354, 1982.

= cucullata var. arenosicola L.B. Smith & B.G. Schubert, 1941.

cucullifolia Hasskarl, Hort. Bogor. Descr., 311, 1858.—A. de Candolle in Martius, Fl. Bras., 4(1):342, 1861 [= *semperflorens* Link & Otto, 1828].—J. Golding, Phytologia, 50:347, 1982.

= cucullata Willdenow var. cucullata, 1805.

cuernavacensis Ziesenhenne, Begonian, 26:9, pl., 1959. Mexico. Fig. 27.9.

cultrata Irmscher, Bot. Jahrb. Syst., 57:243, 1921. Tropical West Africa: Gabon. Fig. 14.52.

cumingiana A. de Candolle, Prodr., 15(1):320, 1864. Philippines. Fig. 16.10.

Petermannia cumingiana Klotzsch, 1855.

Diploclinium cumingianum Miquel, 1856.

cumingii A. Gray, U.S. Expl. Exped. Phan., 15:658, 1854.—A. de Candolle, Prodr., 15(1):320, 1864.—Merrill, Philipp. J. Sci., 3:84, pl. 3, 1908; Philipp. J. Sci., 6:384, "1911," 1912. Philippines. Fig. 27.11.

philippinensis A. de Candolle, 1864.

cuneata Walpers, Repert. Bot. Syst., 2:214, 1843, pro *spathulata* Willdenow ex Sprengel, 1825.—J. Golding, Phytologia, 50:347, 1982.

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Moschkowitzia fagopyroides Klotzsch, 1854.

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Trachelocarpus rhizocarpus C. Mueller in Walpers, 1858.

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Pritzelia fischeri Klotzsch, 1854.

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diffusiflora Merrill & Perry, J. Arnold Arbor., 24:46, pl. 2m,n, 1943. New Guinea. Fig. 17.14.

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Scheidweileria digitata Klotzsch, 1854.

digitata Raddi var. rufescens Irmscher, Webbia, 12:475, 1957. Brazil.

digitata hort. ex Lemaire, Jard. Fleur, 1:14, 1851, non Raddi, 1820.

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digyna Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 6:352, 1927. China. Fig. 4.45.

dimidiata Vellozo, Fl. Flum., vol. 10, pl. 46, "1827," 1831, icon; nomen nudum; Arch. Mus. Nat. Rio de Janeiro, 5:406, 1881, descr.—A. de Candolle in Martius, Fl. Bras., 4(1):378, 1861. Fig. 17.16, icon.
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erosa Wallich 1831, pro parte.
amoena Wallich ex A. de Candolle, 1864.

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Haagea dipetala Klotzsch, 1854.
malabarica var. *dipetala* Thwaites, 1859.

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divaricata Irmscher var. divaricata, Webbia, 9:473, 1953. Sumatra. Fig 21.14
divaricata f. *typica* Irmscher, 1953.

divaricata Irmscher f. minor Irmscher, Webbia, 9:475, 1953. Sumatra.

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domingensis Grisebach, 1860.
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suffruticosa Meisner, 1840.
Augustia dregei Klotzsch, 1854.
natalensis W.J. Hooker, 1855.
Augustia natalensis Klotzsch, 1855.
rubicunda hort. Turic. ex A. de Candolle, 1864.
richardsiana T. Moore, 1871.
richardsoniana Houllet, 1872.
partita Irmscher, 1961.
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edanoi Merrill, Philipp. J. Sci., 13:314, 1918, "*edanoii*." Philippines. Fig. 16.38.
edmundoi Brade, Rodriguesia, 18:33, pl. 6, 1945. Brazil. Fig. 16.32.
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elaeagnifolia J.D. Hooker in Oliver, Fl. Trop. Afr., 2:579, 1871. Gabon, Congo. Fig. 14.15.
poggei sensu De Wildeman, 1912, pro parte, non Warburg, 1894.

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Wageneria fagifolia Klotzsch, 1854, pro parte.

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Stiradotheca magnifica Klotzsch, 1854.

magnifica Linden, 1855.

Stibadotheca ferruginea Klotzsch, 1855.

Stibadotheca magnifica Klotzsch, 1855.

Casparya ferruginea A. de Candolle, 1864.

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hygrophila var. *puberula* C. de Candolle, 1896.
chepoënsis C. de Candolle, 1919.
leptopoda C. de Candolle, 1919.
mameina C. de Candolle, 1919.
heterodonta Rusby, 1920.
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brasiliensis Klotzsch, 1855.
elata Klotzsch, 1855.
moritziana Klotzsch, 1855.
patula sensu Klotzsch, 1855.
setosa Klotzsch, 1855.
tovarensis Klotzsch, 1855.
tovarensis Moritz ex Klotzsch, 1855.
uliginosa Klotzsch, 1855.
vellerea Klotzsch, 1855.
tovarensis var. *ocanensis* A. de Candolle, 1864.
lacustris Wright ex Grisebach, 1866.
ulei C. de Candolle, 1908.
cilibracteata C. de Candolle, 1919.
kaietukensis Tutin, 1940.
roraimensis Tutin, 1940.
fischeri var. *brasiliensis* Irmscher, 1953.
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villosa Gardner, 1842, non Lindley, 1829.
macroptera Klotzsch, 1855.
pohliana Klotzsch, 1855.
macroptera var. *pohliana* A. de Candolle, 1861.
fischeri Schrank var. *fischeri* sensu Brade, 1957.

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intercedens Irmscher, 1953.

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laciniata var. *flava* C.B. Clarke, 1879, pro parte.
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floccifera Beddome, Icon. Pl. Ind. Or., 1:23, pl. 111, 1874. India. Fig. 7.5, icon.

fluminensis Brade, Rodriguesia, 18, pl. 2, 1945. Brazil. Fig. 24.24, icon.

foliosa Humboldt, Bonpland & Kunth var. foliosa, Nov. Gen. Sp., vol. 7, folio 140, quarto 183, pl. 642, 1825.—L.B. Smith & B.G. Schubert, Caldasia, 4, 191, 1946. Colombia, Venezuela, Ecuador. Fig. 17.19, icon.
microphylla herb. Willdenow ex Klotzsch, 1855.
Lepsia foliosa Klotzsch, 1855.

foliosa Humboldt, Bonpland & Kunth var. *amplifolia* L.B. Smith & B.G. Schubert, Caldasia, 4:198, pl. 17, 1946.—L.B. Smith & D.C. Wasshausen, Phytologia, 44:239, 1979.
= holtonis A. de Candolle var. holtonis, 1859.

foliosa Humboldt, Bonpland & Kunth var. australis L.B. Smith & B.G. Schubert, Caldasia, 4:194, pl. 17, 1946. Colombia.
elegans Humboldt, Bonpland & Kunth, 1825.
Casparya elegans Klotzsch, 1854.
Lepsia poeppigiana Klotzsch, 1855.
jamesoniana A. de Candolle, 1859.
foliosa Poeppig ex A. de Candolle, 1864.
poeppigiana A. de Candolle, 1864.

foliosa Humboldt, Bonpland & Kunth var. *miniata* (Planchon) L.B. Smith & B.G. Schubert, Caldasia, 4:196, pl. 17, 1946, fide L.B. Smith, 1981.
= fuchsioides var. miniata A. de Candolle, 1864.

foliosa Humboldt, Bonpland & Kunth var. putzeysiana (A. de Candolle) L.B. Smith & B.G. Schubert, Caldasia, 4:192, pl. 17, 1946. Colombia.
putzeysiana A. de Candolle, 1859.
splendens hort. ex A. de Candolle, 1864.

foliosa Humboldt, Bonpland & Kunth var. rotundata L.B. Smith & B.G. Schubert, Caldasia, 4:192, pl. 17, 1946. Colombia.

foliosa Poeppig ex A. de Candolle, Prodr., 15(1):376, 1864, pro syn. *poeppigiana* A. de Candolle, 1864.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.
= foliosa var. australis L.B. Smith & B.G. Schubert, 1946.

fonsecae Standley, Ceiba, 3:150, 1952.—K. Burt-Utley, Tulane Studies Zool. Bot., 25(1), 1985.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:467, 1984.
= polygonata Liebmann var. polygonata, 1853.

forbesii King, J. Asiat. Soc. Bengal, pt. 2, Nat. Hist., 71:58, 1902. Malaya. Fig. 8.16.

forbesii Vuijck ex Koorders, Exkurs.-Fl., 2:649, 1912, pro syn. muricata Blume, 1823.

fordii Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:501, 1939. China, Fig. 31.24.

forgetiana Hemsley, Gard. Chron., III, 30:66, 1901. Brazil. Fig. 17.31.

formosana (Hayata) Masamune var. formosana, J. Geobot., frontis., pl. 41, 1961.—Liu & Lai, Fl. Taiwan, 3:795, 1977. Taiwan. Sine figura.

sinensis sensu Henry, 1896, non A. de Candolle, 1859.

laciniata sensu Forbes & Hemsley, 1888, non Roxbury, 1832.

laciniata sensu Hayata, 1906.

laciniata var. *formosana* Hayata, 1911.

formosana Masamune f. albomaculata Liu & Lai, Fl. Taiwan, 3:795, 1977. Taiwan.

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forrestii Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:548, 1939. China. Fig. 26.10.

foveolata Irmscher, Bot. Jahrb. Syst., 78:193, pl. 9: fig. 2, 1959. India: Bengal. Fig. 32.5.

foxworthyi Burkill ex Ridley, Fl. Malay Penins., 5, suppl., 311, 1925. Malaya. Fig. 22.36.

fragilis Baker, J. Linn. Soc., 22:479, 1887. Madagascar. Fig. 22.21. Gelata in clave.
M. Keraudren-Aymonin, Fl. Madagascar, 144:30, 1983.

= goudotii A. de Candolle, 1859.

francisiae Ziesenhenne, Begonian, 17:218, pl., 1950, "*francisii.*" Mexico. Fig. 3.12.

francoisii Guillaumin var. francoisii, Bull. Mus. Hist. Nat. (Paris), 31:477, 1925, "francoisi".—M. Keraudren-Aymonin, Fl. Madagascar, 144:50, pl. 15, 1983. Madagascar. Fig. 9.9.

francoisii Guillaumin var. glabra Keraudren, Fl. Madagascar, 144:53, 1983. Madagascar.

franconis Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 21, 1853.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:443, 1983.

= wallichiana Lehmann, 1850, non Steudel, 1840.

friburgensis Brade, Arq. Jard. Bot. Rio de Janeiro, 15:31, pl. 1, 1957. Brazil. Fig. 24.25, icon.

frigida hort. ex A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:143, 1859.—W.J. Hooker, Bot. Mag., vol. 86, pl. 5160, 1860. Fig. 34.3, icon.

fritz-muelleri Brade, Bol. Mus. Nac. Rio de Janeiro, Bot., n.s., 1:12, pl. 3, 1944.—Irmscher, Bot. Jahrb. Syst., 76:29, 1953 [= *limmingheana* Morren, 1866].—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):14, 1971 [= *procumbens* Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

froebelii A. de Candolle, Gard. Chron., 2:552, 1874. Ecuador. Fig. 8.38, non typus.

fruticella Ridley, Trans. Linn. Soc. London, Bot., II, 9:60, 1916. New Guinea. Fig. 21.6.

fruticosa A. de Candolle in Martius, Fl. Bras., 4(1):377, 1861.—L.B. Smith & B.G. Schubert, Darwiniana, 5:114, pl. 17, 1941. Brazil, Argentina. Fig. 14.3, non typus.

Trendelenburgia fruticosa Klotzsch, 1855.

castaneifolia hort. Boissier, 1861.

splendens hort. Boissier ex A. de Candolle, 1861.

fuchsiiflora (A. de Candolle) A. Baranov & F.A. Barkley, Phytologia, 26:220, 1973. Ecuador. Fig. 29.20.

Casparya fuchsiiflora A. de Candolle, 1859.

fuchsiifolia Warburg, 1894.

Stibadotheca fuchsiaefolia, 1902.

fuchsiifolia Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.—A. Baranov & F.A. Barkley, Phytologia, 26:220, 1973, sphalma.

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fuchsioides hort. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854,

pro syn. *Tittelbachia albiflora* Klotzsch, 1854; nomen nudum.

fuchsioides W.J. Hooker var. fuchsioides, Bot. Mag., vol. 73, pl. 4281, 1847.—L.B. Smith & B.G. Schubert, Caldasia, 4:197, 1946.—Nomen legitimum fide L.B. Smith, 1981. Venezuela, Colombia. Fig. 17.18, icon.

Tittelbachia fuchsioides Klotzsch, 1854.

fuchsioides W.J. Hooker var. miniata A. de Candolle, Prodr., 15(1):291, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:197, 1946.—Nomen legitimum fide L.B. Smith, 1981. Bolivia.

miniata Planchon & Linden, 1853.
Tittelbachio miniata Klotzsch, 1854
foliosa var. *miniata* L.B. Smith & B.G. Schubert, 1946.

fulgens hort. Lemoine, Cat. No., 123, 1893, non visus. Descriptione inchoata.

fulvo-setulosa Brade, Arq. Serv. Florest., 2:22, pl. 3, 1943. Brazil. Fig. 13.7, icon.

fulvo-villosa Warburg, Bot. Jahrb. Syst., 13:386, 1891; in Schumann & Lauterbach, Fl. Deutsch. Schutzgeb. Südsee, 459, 1901.

= Symbegonia fulvo-villosa Warburg, 1894.

furfuracea J.D. Hooker in Oliver, Fl. Trop. Afr., 2:571, 1871. Tropical Africa. Fig. 16.23.

fusca Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 7, 1853. Mexico. Fig. 22.37.

maxima hort. ex Klotzsch, 1854.
Magnusia fusca Klotzsch, 1855.
Magnusia maxima Klotzsch, 1855.
karwinskyana A. de Candolle, 1859.
maxima hort. ex A. de Candolle, 1864.
johnstonii Standley ex J.R. Johnson, 1938, non Oliver ex J.D. Hooker, 1886.

fuscocaulis Brade Arq. Jard. Rio de Janeiro, 15:34, pl. 4, 1957. Brazil. Fig. 19.26, icon.

fusialata Warburg, Bot. Jahrb. Syst., 22:37, 1895. Tropical West Africa: Cameroon to Angola. Fig. 21.30.

poggei sensu De Wildeman, 1912, pro parte.

fusibulba C. de Candolle, Candollea, 2:227, 1925. Mexico. Fig. 28.20.

fusicarpa Irmscher, Bot. Jahrb. Syst., 76:212, 1954. West Africa: Liberia. Fig. 13.11.

gagnepainiana Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:538, 1939. China. Fig. 26.28.

duclouxii Gagnepain, 1919, pro parte quoad specimen Ducloux no. 4438.

galeottiana Lemaire, Jard. Fleur, 1:14, 1851, nomen nudum.

velutina hort. Belg. ex Lemaire, 1851.

galeottii hort. Berol. ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 174, 1855; Begoniac., 54, 1855, pro syn. *Ewaldia lobata* Klotzsch, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):375, 1861, "galleotti."

= lobata Schott, 1827.

gamblei sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:44, 1974, sphalmate pro *laciniata* subsp. *gamblei* Irmscher, 1939.

gamolepis L.B. Smith & B.G. Schubert, Caldasia, 4:23, pl. 5, 1946. Colombia. Fig. 21.9, icon.

garagarana C. de Candolle, Smithsonian Misc. Collect., 69(12):2, 1919. Panama. Fig. 23.1.

gardneri A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:138, 1859. Brazil. Fig. 4.24.

garrettii Craib, Bull. Misc. Inform., 411, 1930. Siam. Fig. 4.35.

garuvae L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):91, pl. 28, 1971. Brazil. Fig. 19.12.

gaudichaudii Walpers, Repert. Bot. Syst., 5:769, 1846; Ann. Bot. Syst., 4:875, 1858 [= *Eupetalum petalodes* Lindley, 1836].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.

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gehrigeri L.B. Smith, Phytologia, 27:214, pl. 4, 1973. Venezuela. Fig. 20.43, icon.

L.B. Smith & D.C. Wasshausen, Phytolo-

gia, 56:16, 1984.

= trapa L.B. Smith & B.G. Schubert, var. trapa, 1945.

gehrtii Irmscher, Bot. Jahrb. Syst., 78:188, pl. 9: fig. 1, 1959. Brazil. Fig. 32.23.

gemella Warburg ex Koorders, Natuurk. Tijdscher. Ned. Indië, 63:91, 1904, nomen nudum.—Warburg ex L.B. Smith & D.C. Wasshausen, Phytologia, 52:443, pl. 3, 1983. Indonesia: Celebes. Fig. 25.8.

geminiflora L.B. Smith & D.C. Wasshausen, Phytologia, 44:241, pl. 4, 1979. Ecuador. Fig. 3.15.

gemmipara J.D. Hooker & Thomson, Il. Himal. Pl., pl. 14, 1855. India: Sikkim. Fig. 5.6.

Putzeysia gemmipara Klotzsch, 1855.

gemmirhiza Léveillé, Repert. Spec. Nov. Regni Veg., 9:450, 1911. China. Descriptione inchoata.

geniculata Jack, Malay Misc., 2(7):15, 1822.—Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 1854 [= *Petermannia geniculata* Klotzsch, 1854].—A. de Candolle, Prodr., 15(1):321, 1864.

= isoptera Dryander ex J.E. Smith, 1790.

geniculata Vellozo, Fl. Flum., vol. 10, pl. 51, 1831, icon; Arch. Mus. Nac., 5:407, 1881 desc.—A. de Candolle in Martius, Fl. Bras., 4(1):367, 1861.

= convolvulacea A. de Candolle, 1861.

gentilii De Wildeman, Ann. Mus. Congo, V, 1:294, 1906. Tropical Africa. Fig. 2.17.

geoffrayi Gagnepain, Bull. Mus. Hist. Nat. (Paris), 25:199. 1919. Indochina: Cambodia. Fig. 20.48.

geraniifolia W.J. Hooker, Bot. Mag., vol. 62, pl. 3387, 1835. Peru. Fig. 10.13, icon.

petalodes Lindley, 1836.

Eupetalum petalodes Lindley, 1836.

Eupetalum lindleyanum Gaudichaud, 1837.

gaudichaudii Walpers, 1846.

Eupetalum geraniifolium Klotzsch, 1854.

tuberosa Ruiz ex Klotzsch 1855.

Eupetalum tuberosum Klotzsch, 1855.

Eupetalum kunthianum Klotzsch, 1855.

Eupetalum lindleyanum herb. Kunth ex Klotzsch, 1855.

geranioides J.D. Hooker, Bot. Mag., vol. 92, pl. 5583, 1866. South Africa. Fig. 7.18.

gesnerioides L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:190, 1941. Peru. Fig. 17.4.

gigantea Wallich, Num. List, 129, no. 3677, 1831, pro parte; nomen nudum.—A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:144, 1859 [= *Mezierea nepalensis* A. de Candolle; nomen nudum]; Prodr., 15(1):406, 1864 [= *Mezierea nepalensis* A. de Candolle, 1864].—C.B. Clarke in J.D. Hooker, Fl. Brit. India, 2:643, 1879 [= *gigantea* Wallich ex C.B. Clarke, 1879; sphalmate].—Warburg in Engler & Prantl, Natur. Pflanzenfam., 3(6A):142, 1894.

= nepalensis Warburg var. nepalensis, 1894.

gigantea sensu Wallich, Num. List, 129, no. 3677 B, 1831, nomen nudum.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:636, 1879.

= silletensis C.B. Clarke, 1879.

gilgiana Irmscher, Bot. Jahrb. Syst., 50:340, 1913; Bot. Jahrb. Syst., 50:565, pl. 2.7, 1914. New Guinea. Fig. 18.15.

gilgii Engler, Veg. Erde, 9(3.2):616. 1921. Tropical West Africa: Fernando Po. Fig. 3.8.

gitingensis Elmer, Leafl Philipp. Bot., 2:738, 1910. Philippines. Fig. 14.37.

glaberrima Urban & Ekman, Ark. Bot., 23A(5):99, 1930. West Indies: Haiti. Fig. 34.4.

glabra Aublet var. glabra, Hist. Pl. Guiane, 2:916, pl. 349, 1775. West Indies, Mexico to Ecuador. Fig. 14.7, non typus.

Rumex sylvestris scandens, foliis cordato angulatis ab altera parte majoribus Browne, 1756.

scandens Swartz, 1788.

elliptica Humboldt, Bonpland & Kunth, 1825.

populifolia Schott in Sprengel, 1827, non Humboldt, Bonpland & Kunth, 1825.

lucida Otto & Dietrich, 1848.
moritziana Kunth & Bouché, 1848.
physalifolia Liebman, 1853.
Wageneria glabra Klotzsch, 1854.
Wageneria lucida Klotzsch, 1854.
Wageneria deflexa Klotzsch, 1855.
Wageneria montana Klotzsch, 1855.
locellata A. de Candolle, 1859.
Pritzelia deflexa A. de Candolle, 1864.
Pritzelia glabra A. de Candolle, 1864.
Pritzelia lucida A. de Candolle, 1864.
Pritzelia montana A. de Candolle, 1864.
hoegeana Regel & Schmidt, 1886.
repens Sésse & Mociño, 1894.

glabra Aublet var. amplifolia (A. de Candolle) L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:191, 1941. Colombia.
scandens var. *amplifolia* A. de Candolle, 1864.

glabra Aublet var. coralipetiolis hort. Begonian, 13:153, 1946. Costa Rica.

glabra Aublet var. cordifolia (C. de Candolle) Irmscher, Pareys Blumengartnerei, ed. 2:72, 1960.
scandens var. *cordifolia* C. de Candolle, 1907.

glabra Aublet var. *physalifolia* Liebmann ex Buxton Check List Begonias, 78, 1957, nomen nudum.

glabra Vuijck ex Koorders, Exkurs.-Fl., 2:647, 1912, pro syn. vuijckii Koorders, 1912.

glabra herb. Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 128, 1854, pro syn. *Sassea glabra* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya columnaris* var. *glabra* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.
= urticae Linnaeus f. var. urticae, 1781.

glabricaulis Irmscher var. glabricaulis, Bot. Jahrb. Syst., 50:371, 1913; Bot. Jahrb. Syst., 50:569, pl. 3.9, 1914. New Guinea. Fig. 18.11.

glabricaulis Irmscher var. brachyphylla Irmscher, Bot. Jahrb. Syst., 50:373, 1913. New Guinea.

gladiifolia Engler, Veg. Erde, 9(3.2):619, 1921.—emend. Wilczek, Bull. Jard. Bot. Nat. Belg., 39:84, 1969. Fernando Po, Cameroon, Congo. Fig. 14.16.
ludwigsii Gilg ex Wilczek, 1969.
squamulosa auct. ex Wilczek, 1969, non J.D. Hooker, 1871.

glandulifera Grisebach, Fl. Brit. W. I., 304, 1860, non visus.—W.J. Hooker, Bot. Mag., vol. 94, pl. 5695, 1868. Trinidad, Venezuela. Fig. 23.27, icon.

glandulosa W.J. Hooker, Bot. Mag., vol. 87, pl. 5256, 1861.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24(1):178, 1961.—J. Golding, Phytologia, 40:458, 1978, nomen confusum.
= pinetorum A. de Candolle, 1859.

glandulosa sensu A. de Candolle, Prodr., 15(1):339, 1864, non W.J. Hooker, 1861.—Standley, Field Mus. Nat. Hist. Bot., 18:744, 1937.—J Golding, Phytologia, 40:458, 1978, nomen confusum.
= multinervia Liebmann, 1853.

glandulosa sensu J.D. Smith, Enum. Pl. Guat., 4:182, 1895, non W.J. Hooker, 1861, non A. de Candolle, 1864.—L.B. Smith & B.G. Schubert Ann. Missouri Bot. Gard., 45:46, 1958.
= plebeja Liebmann var. plebeja, 1853.

glauca (Klotzsch) Ruiz & Pavon ex A. de Candolle, Prodr., 15(1):330, 1864. Peru. Fig. 20.28.
Pritzelia glauca Klotzsch, 1855.
glauca Ruiz ex Klotzsch, 1854.

glauca Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, pro syn. *Pritzelia glauca* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):330, 1864.
= glauca Ruiz & Pavon ex A. de Candolle, 1864.

glaucoides Irmscher, Bot. Jahrb. Syst., 74:582, 1949. Peru. Sine figura.

glaucophylla J.D. Hooker, Bot. Mag., vol. 118, pl. 7219, 1892.—Irmscher, Bot. Jahrb. Syst., 76:29, 1953 [= *limmingheana* Morren, 1866].—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):14, 1971 [= *pro-*

cumbens Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

glaucophylla J.D. Hooker var. *scandens* hort. ex Fotsch, Begonien, 26, 1933, pro syn. *glaucophylla* J.D. Hooker, 1892.—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):14, 1971 [= *procumbens* Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

glaucophylla J.D. Hooker var. *splendens* hort. ex Fotsch, Begonien, 26, 1933, pro syn. *glaucophylla* J.D. Hooker, 1892.—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):14, 1971 [= *procumbens* Vellozo, 1831].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= radicans Vellozo, 1831.

goegoensis N.E. Brown, Gard. Chron., 2:71, 1882.—Fotsch, Begonien, 38, pl. 14, 1933.—Graf, Exotica, 3:306, pl. 1963. Sumatra. Fig. 2.29.

goniotis C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:648, 1879. Burma. Fig. 21.11.

gossweileri Irmscher, Bot. Jahrb. Syst., 81:184, 1961. West Africa: Angola. Fig. S16.

goudotii A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:131, 1859.—M. Keraudren-Aymonin, Fl. Madagascar, 144:30, pl. 7, 1983. Madagascar. Sine figura.

fragilis Baker, 1887.

gouroana A. Chevalier, Bull. Soc. Bot. France, 58(Mem. 8d):176, "1911," 1912.—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2., 1:219, 1954.

= macrocarpa Warburg, 1895.

gracilicaulis Irmscher, Bot. Jahrb. Syst., 57:244, 1921. West Africa: Cameroon. Fig. S20.

latistipula Engler, 1921.

gracilipes Merrill, Philipp. J. Sci., 6:405, "1911," 1912. Philippines. Fig. 9.20.

gracilipetiolata De Wildeman, Ann. Mus. Congo, V, 2:319, 1908.—emend. Fernandes, Bol. Soc. Brot., II, 44:9, pl. 3, 1970. Tropical Africa. Fig. 14.11.

poggei sensu De Wildeman, 1912, pro parte.

gracilis Humboldt, Bonpland & Kunth var. gracilis, Nov. Gen. Sp., vol. 7, folio 141, quarto 184, 1825, Mexico. (Fig. 28.29.)

gracilis Humboldt, Bonpland & Kunth var. annulata A. de Candolle, Prodr., 15(1):309, 1864. Mexico.

gracilis Humboldt, Bonpland & Kunth var. depauperata A. de Candolle, Prodr., 15(1):309, 1864. Mexico.

gracilis Humboldt, Bonpland & Kunth var. diversifolia A. de Candolle, Prodr., 15(1):310, 1864. Mexico. (Fig. 28.29.)

diversifolia Graham, 1829. Fig. 28.29, icon.

diversifolia Knowles & Wescott, 1837.

gracilis Humboldt, Bonpland & Kunth var. martiana A. de Candolle, Prodr., 15(1):309, 1864. Mexico.

Totoncaxoxo coyollin Hernandez, 1651.

martiana Link & Otto, 1829.

heterophylla hort. ex Klotzsch, 1854.

Knesebeckia martiana Klotzsch, 1854.

bulbillifera Moricand ex A. de Candolle, 1864.

tuberosa Sessé & Mociño, 1890.

gracilis Humboldt, Bonpland & Kunth var. membracea A. de Candolle, Prodr., 15(1):309, 1864. Mexico.

gracilis Humboldt, Bonpland & Kunth var. nervipilosa A. de Candolle, Prodr., 15(1):309, 1864. Mexico.

gracillima A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:120, 1859. Peru. Fig. 8.31.

grahamiana Wight, Icon. Pl. Ind. Or., 5(2):9, pl. 1811, 1852.—A. de Candolle, Prodr., 15(1):389, 1864.

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grandibracteolata Irmscher, Bot. Jahrb. Syst., 76:91, 1953.—L.B Smith & D.C. Wasshausen, Phytologia, 54:467, 1984.

= aeranthos L.B. Smith & B.G. Schubert, 1952.

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= octopetala L'Heritier var. octopetala, 1788.

grandifolia Jacquin, Collectanea, 1:128, 1787, excl. syn. Brown [= *macrophylla* Lamarck, 1785].—J. Golding, Phytologia, 45:246, 1980.

= obliqua Linnaeus var. obliqua, 1753.

grandipetala Irmscher, Bot. Jahrb. Syst., 50:377, 1913. Indonesia: Celebes. Fig. 4.9.

grandis Dryander var. grandis, Trans. Linn. Soc., 1:163, 1791. Japan, China. (Fig. 12.21.)

grandis Dryander subsp. evansiana (Andrews) Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939, "*grandis* conta. *evansiana*." China. (Fig. 12.21.)

Sjukaido Kaempfer, 1712.

obliqua sensu Thunberg, 1784, non Linnaeus, 1753.

evansiana Andrews, 1811. Fig. 12.21, icon.

discolor R. Brown, 1813.

bulbifera hort. ex Steudel, 1821.

Diploclinium evansianum Lindley, 1846.

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walpersii Heynhold, 1846.

Donaldia ottonis Klotzsch, 1854.

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rubro-venia W.J. Hooker, 1853.
rubro-nervia hort. ex Klotzsch, 1855.
Platycentrum rubro-venium Klotzsch, 1855.

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mairei Léveillé, 1912.

delavayi Gagnepain, 1919.

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radiata Graham, 1833.

tanacetifolia hort. ex Graham, 1833.

nigrescens Van Houtte ex Otto, 1852.

Gireoudia heracleifolia Klotzsch, 1854.

Gireoudia heracleifolia var. *viridis* Klotzsch, 1855.

jatrophifolia hort. ex Klotzsch, 1855.

trignoptera Sprague, 1921.

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Gireoudia punctata Klotzsch, 1854.

Gireoudia heracleifolia var. *punctata* Klotzsch, 1855.

nigricans hort. Berol ex Klotzsch, 1855.

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raulinii Brade, 1948.

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Begonia hirsuta, flore albo, folio aurito fructu coronato Barrere, 1741.

obliqua var. *zeta* Linnaeus, 1753.

humilis sensu Bonpland, 1817, non Dryander, 1789.

hirsuta hort. Kew, 1857 ex A. de Candolle in Martius, Fl. Bras. 4(1):343, 1861, pro syn. humilis Dryander var. humilis, 1789.

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hirsuta Brace ex Ridley, J. Straits Branch Roy. Asiat. Soc., 46:254, 1906, pro syn. pubescens Ridley, 1906.

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columnaris herb. Ruiz. ex Klotzsch, 1854.

coccinea Ruiz & Pavon ex Klotzsch, 1855, pro parte.

Casparya columnaris Klotzsch, 1855.

Casparya hirta Klotzsch, 1855.

Casparya cordifolia var. *hirta* A. de Candolle, 1864.

hirta L.B. Smith & B.G. Schubert var. cordifolia (A. de Candolle) L.B. Smith & B.G. Schubert, Field. Mus. Nat. Hist., Bot. Ser., 13:192, 1941. Peru. Fig. 29.15.

Casparya cordifolia A. de Candolle, 1864.

cordifolia Warburg, 1894, non A. de Candolle, 1864.

hirta Wallich ex W.J. Hooker, Exotic Fl., 2:89, 1825, pro syn. picta J.E. Smith, 1807.

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ciliata Humboldt, Bonpland & Kunth, 1825.

villosa Lindley, 1829.

brasila A. de Candolle, 1836.

brasiliana Schrank ex Steudel, 1840.

dasypoda Meisner ex A. de Candolle, 1861.

humilis sensu Duss, 1897, non Dryander, 1789.

hirtella Link var. nana A. de Candolle in Martius, Fl. Bras., 4(1):345, 1861. Brazil.

diversifolia var. *nana* Walpers, 1843.

ciliata var. *nana* Klotzsch ex de Candolle, 1861.

villosa var. *nana* Klotzsch ex A. de Candolle, 1861.

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Wageneria tomentosa Klotzsch, 1854.

Wageneria hispida Klotzsch ex A. de Candolle, 1861.

hammoniae Irmscher, 1953.

reitzii Brade, 1958.

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hispidivillosa Ziesenhenne f. nigramarga Ziesenhenne, Begonian, 49:63, 1882.

hitchcockii Irmscher, Bot. Jahrb. Syst., 74:620, 1949. Ecuador. Fig. 3.17.

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1886.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:467, 1984.
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hoehneana Irmscher, Bot. Jahrb. Syst., 76:69, pl. 2: figs. 3–5, 1953. Brazil. Fig. 9.2, icon.

holosericea Teijsmann & Binnendijk, Epim. Lugd. Bat., 5, 1863, non visus. Indonesia: Mollucas. Fig. 22.1
Diploclinium holosericeum Teijsmann & Binnendijk, 1863.

holostyla sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:55, 1974, sphalmate pro grandis subsp. holostyla Irmscher, 1939.

holtonis A. de Candolle var. holtonis, Ann. Sci. Nat. Bot., IV, 11:141, 1859.—L.B. Smith & B.G. Schubert, Caldasia, 4:186, pl. 15, 1946.—L.B. Smith & D.C. Wasshausen, Phytologia, 44:239, 1979. Colombia. Fig. 14.47.
umbrata hort. ex A. de Candolle, 1864.
foliosa var. *amplifolia* L.B. Smith & B.G. Schubert, 1946.
schimpffii Irmscher, 1949.

holtonis A. de Candolle var. macrophylla L.B. Smith & B.G. Schubert, Caldasia, 4:187, 1946. Colombia.

holttumii Irmscher, Mitt. Inst. Allg. Bot Hamburg, 8:113, 1929. Malaya. Fig. 28.35.
isoptera Ridley, 1922, pro parte.

homblei De Wildeman, Bull. Jard. Bot. Etat., 5:51, 1915.—Irmscher, Bot. Jahrb. Syst., 81: 120, 1961 [= *princeae* var *princeae* f. *vulgata* Irmscher, 1961].—Wilczek, Fl. Congo, Rwanda, Burundi, 44, 1969.
= princeae Irmscher var. princeae, 1961.

homonyma Steudel, Nom. Bot., ed. 2:194, Aug 1840.—A. de Candolle, Prodr., 15(1): 384, 1864 [= *dregei* var. *sinuata* A. de Candolle, 1864].—Irmscher, Bot. Jahrb. Syst., 81:136, 1961 [= *caffra* Meisner, 1841].—Burtt, Notes Roy. Bot. Gard. Edinburgh, 32:274, 1973, nomen legitimum.—Hilliard in Ross, Fl. South. Afr., 22:141, pl. 46: fig. 1, 1976. South Africa. (Fig. 33.3.)
sinuata E. Meyer ex Otto & Dietrich 1836, non Wallich ex Meisner, 1836.
sinuata Graham, 1839, non Wallich ex Meisner, 1836. Fig. 33.3, non typus.
caffra Meisner, 1841.
uncinata hort. ex Klotzsch, 1854.
Augustia caffra Klotzsch, 1855.
caffra Drege ex A. de Candolle, 1864.
dregei var. *caffra* A. de Candolle, 1864.
dregei var. *sinuata* A. de Candolle, 1864.
favargeri Rechinger, 1905.
caffra var. *favargeri* Irmscher, 1961.
rudatisii Irmscher, 1961.

hookerana Gardner, Lond. J. Bot., 4:135, 1845, "*hookeriana*".—Saunders, Refug. Bot., vol. 5, pl. 341, 1880. Brazil. Fig. 19.10, icon.
Riessia ferruginea Klotzsch, 1855.
Steineria ferruginea Klotzsch, 1855.

hookerana Gilg ex Engler, Veg. Erde, 9(3.2):617, 1921, non Gardner, 1845; "*hookeriana*"; fide L.B. Smith & D.C. Wasshausen, in litteris.
= scutulum J.D. Hooker, 1871.

hookeri Sweet Hort. Brit., ed. 2:437, 1830.—A. de Candolle in Martius. Fl. Bras. 4(1):342, 1861 [= *semperflorens* var., *hookeri* A. de Candolle, 1861].—J. Golding, Phytologia, 50:347, 1982.
= cucullata Willdenow var. cucullata, 1805.

horsfieldii Miquel, Fl. Ned. Ind., 1.1:691, 1856, pro syn. *Diploclinium horsfieldii* Miquel, 1856.—Miquel ex A. de Candolle, Prodr. 15(1):397, 1864. Indonesia: Sumatra. Fig. 8.10.

horticola Irmscher, Bot. Jahrb. Syst., 57:242, 1921. West Africa: Congo. Fig. 11.1.
poggei sensu De Wildeman, 1908, pro parte.

houttuynioides Yü, Icon. Pl. Omeiensium, 2, pl. 152, 1946. China. Fig. 9.16, icon.

howii Merrill & Chun, Sunyatsenia, 5:138, pl. 20, 1940. China. Fig. 12.9.

huberi C. de Candolle in Huber, Bull. Herb. Boissier, II, 1:315, 1901.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:444, 1983.
= reniformis Dryander, 1791.

huberti Ziesenhenne, Begonian, 48:308, 1980. Mexico. Fig. 28.57.

huegelii (Klotzsch) ex A. de Candolle in Martius, Fl. Bras., 4(1):366, 1861, "*hugellii.*" Brazil. Fig. 29.6.

Wagneria huegelii Klotzsch, 1855.

hullettii Ridley, J. Straits Branch Roy. Asiat. Soc., 46:255, 1906, "*hulletti.*" Borneo. Fig. 14.30.

humbertii Keraudren, Fl. Madagascar, 144:100, pl. 32, 1983. Madagascar. Editus sero pro clave.

humboldtiana L.S. Gibbs, Fl. Arfak. Mts., 215, 1917. New Guinea. Fig. 21.16.

humilicaulis Irmscher, Bot. Jahrb. Syst., 50:356, 1913. Indonesia: Celebes. Fig. 6.11.

humilis Dryander var. humilis in Aiton, Hort. Kew., 3:353, 1789; Trans. Linn. Soc., 1:166, pl. 15, 1791. West Indies to Peru and Brazil. Cult. Madagascar. Fig. 27.36, icon.

lucida Haworth, 1821.
meyeniana Walpers, 1843.
hirsuta herb. Ruiz ex Klotzsch, 1854.
Pilderia hirsuta Klotzsch, 1854.
pavoniana A. de Candolle, 1859.
subhumilis A. de Candolle, 1859.
hirsuta hort. Kew ex A. de Candolle, 1861.
hirsuta Pavon ex A. de Candolle, 1864.
guyanensis var. *cearensis* C. de Candolle, 1901.
lokobeënsis Humbert, 1972.

humilis var. *glabrata* Seemann, Bot. Voy. Herald, 128, 1854.—A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:142, 1859 [= *flexuosa* A. de Candolle, 1859].—Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 18:745, 1937.

= semiovata Liebmann, 1853.

humilis var. porterana A. de Candolle in Martius, Fl. Bras., 4(1):344, 1861, "*porteriana.*" Brazil.

porterana Fischer, Meyer & Ave-Lallemant, 1842.
haematotricha hort. Boissier ex A. de Candolle, 1861.
Pilderia erythrotricha Klotzsch ex A. de Candolle, 1861.

humilis sensu Ker-Gawler, Bot. Reg., vol. 4, pl. 284, 1818.—Haworth, Succ. Pl. Suppl., 100, 1819 [= *suaveolens* Loddiges, 1817]. —O.E. Schulz in Urban, Symb. Antil., 7:19, 1911.

= odorata Willdenow, 1813.

humilis sensu Bonpland, Descr. Pl. Malmaison, 11, pl. 62, 1817, non Dryander, 1789.—Sprengel, Syst. Veg., 2:626, 1825.

= hirsuta Aublet, 1775.

humilis sensu Duss, Fl. Phan. Antil. France, 2:321, 1897, non Dryander, 1789.—O.F. Schulz in Urban, Symb. Antil., 7:28, 1911.

= hirtella Link var. hirtella, 1822.

humillima L.B. Smith & D.C. Wasshausen, Phytologia, 53:297, pl. 1, 1983. Venezuela. Fig. 26.29.

hydrocotylifolia Otto ex W.J. Hooker var. hydrocotylifolia, Bot. Mag., vol. 69, pl. 3968, 1842. Mexico. Fig. 7.3.

Gireoudia hydrocotylifolia Klotzsch, 1854.

hydrocotylifolia Otto ex W.J. Hooker var. asarifolia A. de Candolle, Prodr. 15(1):344, 1864. Mexico.

asarifolia Liebmann, 1953.
Gireoudia asarifolia Klotzsch, 1854.

hydrophila Miquel, Anal. Bot. Ind., 3:18, 1852.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:655, 1879.

= malabarica var. hydrophila C.B. Clarke, 1879.

hydrophylloides L.B. Smith & B.G. Schubert, Caldasia, 4:7, pl. 1, 1946. Colombia. Fig. 4.44, icon.

hygrophila C. de Candolle, Bull. Soc. Bot. Belgique, 35:265, 1896.—L.B. Smith & B.G. Schubert, Caldasia, 4:80, 1946.

= filipes Bentham, 1844.

hygrophila var. *puberula* C. de Candolle, Bull. Soc. Roy. Bot. Belgique, 35:266, 1896.—L.B. Smith & B.G. Schubert, Caldasia, 4:80, 1946.

= filipes Bentham, 1896.

hymenophylla Gagnepain, Bull. Mus. Hist. Nat. (Paris), 25:200, 1919. Indochina: Laos. Fig. 4.26.

hymenophylloides F.K. Ward, Gard. Chron., III, 104:474, 1938, in obs.—F.K. Ward ex L.B. Smith & D.C. Wasshausen, Phytologia, 54:467, 1984, nomen legitimum.—L.B. Smith & D.C. Wasshausen, Phytologia, 55:112, 1984. Tibet-Burma. Fig. S9.

hypogaea Winkler, Bot. Jahrb. Syst., 38:261, 1906. Tropical Africa. Sine figura.

hypolipara Sandwith, Bull. Misc. Inform., 99, 1931. Honduras. Fig. 7.8. Gelata in clave. K. Burt-Utley, Phytologia, 54:488, 1984.

= sericoneura Liebmann, 1853.

ignea Warzewicz ex A. de Candolle var. ignea, Prodr., 15(1):306, 1864. Guatemala. Fig. 4.10.

Knesebeckia ignea Klotzsch, 1855.

ignea Warzewicz ex A. de Candolle tuberosa C. de Candolle, Bull. Soc. Roy. Bot. Belgique, 35:267, 1896. Costa Rica.

ignorata Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:97, 1929. Malaya. Fig. 2.47.

hasskarlii var. *hirsuta* Ridley, 1922.

imitans Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:511, 1939. China. Fig. S8.

imperfecta Irmscher, Bot. Jahrb. Syst., 50:367, 1913. Indonesia: Celebes. Fig. 30.29.

imperialis Lemaire var. imperialis, Ill. Hort., 7(Misc.):53, 1860; Ill. Hort., vol. 8, pl. 274, 1861. Mexico. Fig. 8.35.

imperialis var. *brunnea* Lemaire, 1861.

imperialis Lemaire var. smaragdina Lemaire, Ill. Hort., vol. 7, pl. 262, 1860.

imperialis Lemaire var. *brunnea* Lemaire, Ill. Hort., vol. 8, sub pl. 274, 1861.

= imperialis Lemaire var. imperialis, 1860.

imperialis Lemaire var. maculata Lemaire, Ill. Hort., vol. 8, sub. pl. 274, 1861

inanis Irmscher, Bot. Jahrb. Syst., 74:616, 1949.—L.B. Smith, Phytologia, 27:212, 1973 [= *rosacea* sensu L.B. Smith, 1973, pro parte].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:444, 1983 [= *quetamensis* L.B. Smith & B.G. Schubert, 1946].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:468, 1984.

= novogranatae A. de Candolle, 1864.

incana Lindley, Bot. Reg., 27(misc.):39, May 1841.—J. Golding, Phytologia, 47:291, 1981.

= peltata Otto & Dietrich var. peltata, Feb 1841.

incana var. *auriformis* A. de Candolle, Prodr., 15(1:)327, 1864.—J. Golding, Phytologia, 47:292, 1981.

= peltata var. auriformis J. Golding, 1981.

incarnata Link & Otto var. incarnata, Icon. Pl. Rar., 4:37, pl. 19, 1829. Mexico. (Fig. 30.19.)

insignis Graham, 1829. Fig. 30.19, icon.

martiana sensu Schlechter, 1830, non Link & Otto, 1829.

ciliata hort. ex Steudel, 1840.

aucibifolia hort. ex Klotzsch, 1854.

Knesebeckia aucubifolia Klotzsch, 1854.

Knesebeckia incarnata Klotzsch, 1854.

subpeltata hort. ex Regel, 1866, non Wight, 1852.

incarnata Link & Otto var. papillosa A. de Candolle, Prodr., 15(1:)309, 1864. Mexico.

papillosa Graham, 1828.

Knesebeckia papillosa Klotzsch, 1854.

incarnata 'Purpurascens' Regel, Gartenflora, 15:358, 1866, taxa hybridogena.

subpeltata 'Rubra' ex Irmscher, 1960.

incarnata sensu Seemann, Bot. Voy. Herald, 4:128, 1854.—A. de Candolle, Prodr., 15(1):332, 1864.

= seemanniana A. de Candolle, 1859.

incerta Craib, Bull. Misc. Inform., 57, 1911. Siam. Fig. 7.23.

incisa A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:129, 1859. Philippines. Fig. 6.13.

incisoserrata A. de Candolle in Martius, Fl. Bras., 4(1):374, 1861. Brazil. Fig. 4.5.

Scheidweileria incisoserrata Klotzsch, 1855.

Wagneria incisoserrata Klotzsch ex A. de Candolle, 1861.

incondita Craib, Bull. Misc. Inform., 412, 1930.

Siam. Fig. 34.8.

inconspicua Brade, Rodriguesia, 18:31, pl. 4, 1945. Brazil. Fig. 17.15, icon.

inculta Irmscher var. inculta, Bot. Jahrb. Syst., 76:48, 1953. Brazil. Fig. 16.9.

inculta Irmscher var. vestita Handro, Loefgrenia, 27:3, 1968. Brazil.

inermis Irmscher, Bot. Jahrb. Syst., 76:39, 1953.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:444, 1983. Fig. 31.17.

= reniformis Dryander, 1791.

inflata C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:636, 1879. India. Fig. 30.12.

injoloensis De Wildeman, Ann. Mus. Cong., V., 2:317, pl. 78, 1908; Ann. Mus. Cong., V., 3:451, 1912.

= rhopalocarpa Warburg, 1895.

inostegia Stapf, Trans. Linn. Soc. London Bot., II, 4:166, 1894; in J.D. Hooker, Icon. Pl., vol. 24, pl. 2309, 1895. Borneo. Fig. 12.22, icon.

insignis Graham, Edinburgh New Philos. J., vol. 11 [date unknown]; non visus; Bot. Mag., vol. 56, pl. 2900, 1829.—Walpers, Repert. Bot. Syst., 2:213, 1843.

= incarnata Link & Otto var. incarnata, 1829.

insularis Brade, Arq. Jard. Bot. Rio de Janeiro, 15:32, pl. 2, 1957. Brazil. Fig. 19.7, icon.

insularum Irmscher, Bot. Jahrb. Syst., 50:353, 1913. Indonesia: Sangir Island. Fig. 21.25.

integerrima Sprengel var. integerrima, Neue Entdeck, 2:174, 1820. Brazil. Fig. 12.26.

populnea A. de Candolle, 1859.

integerrima Sprengel var. cardioides Irmscher, Bot. Jahrb. Syst., 76:30, 71, 1953. Brazil.

integrifolia Dalzell var. integrifolia in W.J. Hooker, J. Bot. Kew Gard. Misc., 3:230, 1851. India. Fig. 28.34.

integrifolia Dalzell var. *guttata* Gagnepain in Lecomte, Fl. Indo-Chine, 2:1114, 1921.—Irmscher, Mitt. Inst. Bot. Hamburg, 8:153, 1929. Indochina: Laos.

= guttata Wallich ex A. de Candolle var. guttata, 1864.

intercedens Irmscher, Bot. Jahrb. Syst., 76:97, 1953.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:468, 1984.

= fischeri var. malvacea Irmscher, 1953.

intermixta Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:101, pls. 1, 2, 1929. Siam, Malaya. Fig. 7.19.

inversa Irmscher var. inversa, Webbia, 9:505, 1953. Sumatra. Fig. S15.

inversa f. nana Irmscher, Webbia, 9:507, 1953. Sumatra.

involucrata Liebmann var. involucrata, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 15, 1853. Central America: Costa Rica, Panama. Fig. 4.55 (Fig. 32.8).

Gireoudia involucrata Klotzsch, 1854.

Gireoudia laciniata Klotzsch, 1855.

broussonetiifolia A. de Candolle, 1859. Fig. 32.8.

laciniosa A. de Candolle, 1864.

involucrata var. *purpurascens* hort. ex. Fotsch, Begonien, 41, 1933, pro syn. metachroa Fotsch, 1933.

ionophylla Irmscher, Bot. Jahrb. Syst, 50:378, 1913. Sumatra. Fig. 23.9.

iridescens Dunn, Bull. Misc. Inform., 110, 1920. India: Himalaya. Fig. 23.12.

irmscheri L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci. 45:112, 1955. Colombia. Fig. 15.3.

Begoniella angustifolia Oliver, 1884.

isabelensis Quisumbing & Merrill, Philipp. J. Sci, 37:173, 1928. Philippines. Fig. 24.40.

isalensis Humbert, Bull. Soc. Bot. France, 118:739, pl. 2: figs. 1–7, "1971," 1973. Madagascar. Fig. 8.8.

isoptera Dryander ex J.E. Smith, Pl. Icon, pl. 43, 1790; Trans. Linn. Society, 1:160, 1791. Java. Fig. 21.22, icon.

geniculata Jack, 1822.

angustifolia Blume, 1827.

bombycina Blume, 1827.

repanda Blume, 1827.

wrayi Hemsley, 1827.

Petermannia geniculata Klotzsch, 1854.

Diploclinium bombycinum Klotzsch, 1855.

Diploclinium repandum Klotzsch, 1855.

Diploclinium angustifolia Miquel, 1856.

isoptera sensu Ridley, Fl. Malay Penins., 5:855, 1922, non Dryander, 1790.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:112, 113, 1929.

= pseudisoptera Irmscher, 1929, pro parte.

= holttumii Irmscher, 1929, pro parte.

isopterocarpa Irmscher, Bot. Jahrb. Syst., 76:57, 1953.—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):94, pl. 23, 1971. Brazil. Fig. 29.23.

bauensis Brade, 1958.

isopteroidea King, J. Asiat. Soc. Bengal, pt. 2, Nat. Hist., 71:59, 1902. Malaya. Fig. 27.20.

itaguassuensis Brade, Arq. Jard. Bot. Rio de Janeiro, 8:234, pl. 7, 1948. Brazil. Fig. 24.37, icon.

itajaiensis Brade, Arq. Jard. Bot. Rio de Janeiro, 13:76, pl. 3, 1954.—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):83, 1971.

= echinosepala Regel var. echinosepala, 1871.

itatiaiensis Brade, Rodriquesia, 18:18, pl. 2, 1945. Brazil. Fig. 26.11.

itatinensis Irmscher ex Brade, Bot. Mus. Nac. Rio de Janeiro, Bot., 1:15, pl. 7, 1944. Brazil. Fig. 15.2, icon.

adiantiformis Toledo, 1946.

itupavensis Brade, Arq. Jard. Bot. Rio de Janeiro, 12:7, pls. 1, 5: figs. 1–6, 1952. Brazil. Fig. 20.46.

iucunda Irmscher, Bot. Jahrb. Syst., 81:186, 1961. Africa: Congo. Fig. 21.24.

jagorii Warburg in Perkins, Fragm. Flor. Philipp., 54, 1904, "jagori." Philippines. Fig. 19.8.

jairii Brade, Arq. Jard. Bot. Rio de Janeiro, 10:135, pl. 5, 1950, "jairi." Brazil. Fig. 17.5, icon.

jamaicensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:124, 1859.—O.E. Schulz in Urban, Symb. Antil., 7:17, 1911 [= *purpurea* Swartz, 1788; nomen validum sed illegitimum fide L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983]. Jamaica. Fig. 30.32.

purpurea Swartz, 1788.

acutifolia Swartz, 1800, non Jacquin, 1787.

suaveolens F. Hamilton in D. Don, 1825, non Loddiges, 1817.

jamesoniana A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:139, 1859.—L.B. Smith & B.G. Schubert, Lloydia, 13:86, 1950. Ecuador.

= foliosa var. australis L.B. Smith & B.G. Schubert, 1946.

jatrophifolia hort. ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 215, 1855; Begoniac., 94, 1855, "*jatrophaefolia*," pro syn. *Gireoudia heracleifolia* var. *viridis* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1:)335, 1864.

= heracleifolia Schlechtendal & Chamisso var. heracleifolia, 1830.

jenmanii Tutin, J. Bot., 78:252, 1940, "jenmani." Guyana. Fig. 28.40.

jocelinoi Brade, Arq. Jard. Bot. Rio de Janeiro, 13:71, pl. 1, 1954. Brazil. Fig. 4.20, icon.

johnstonii Oliver ex J.D. Hooker f. johnstonii, Bot. Mag., vol. 112, pl. 6899, 1866, "*johnstoni*".—Irmscher, Bot. Jahrb. Syst., 81:150, 1961. Tanganyika, Kenya. Fig. 34.9, icon.

johnstonii Oliver f. pilosa Irmscher, Bot. Jahrb. Syst., 81:151, 1961. Tanganyika.

johnstonii Standley ex J.R. Johnston, Cat. Pl. Guatemala, 12, 1938, nomen nudum; non Oliver ex J.D. Hooker, 1866.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:167, 1961.

= fusca Liebmann, 1853.

josephii A. de Candolle var. josephii, Ann. Sci. Nat. Bot., IV, 11:126, 1859, "*josephi.*" India. Fig. 3.3.

picta sensu Wallich, 1831, non J.E. Smith, 1807.

scutata sensu Wallich, 1831, nomen nudum, non Wallich ex A. de Candolle, 1864.

josephii A. de Candolle var. macrocarpa A. de Candolle, Prodr., 15(1):314, 1864. India.

josephii A. de Candolle var minima C.B. Clarke in J.D. Hooker, Fl. Brit. Ind.,

2:639, 1879.

juliana Loefgren ex Hoehne, Res. Hist. Secc. Bot. Agron. Inst. Biol. Sao Paulo, 147, 1937, nomen nudum, non visus.—Loefgren ex Irmscher, Bot. Jahrb. Syst., 76:62, 1953. Brazil. Fig. 19.16.

junghuhniana Miquel, Pl. Jungh, 4:418, "1855," 1857.—Backer & Van den Brink, Fl. Java, 1:309, 1964.

= coriacea Hasskarl, 1844.

junghuhniana f. *acutifolia* Miquel ex Koorders, Exkur.-Fl. Java, 2:644, 1912, pro syn. *junghuhniana* Miquel, 1857.—Backer & Van den Brink, Fl. Java, 1:309, 1964.

= coriacea Hasskarl, 1844.

juninensis Irmscher, Bot. Jahrb. Syst., 74:594, 1949. Peru. Fig. 20.12.

juntasensis Kuntze, Revis. Gen. Pl., 3(2):106, 1898. Bolivia. Fig. S36.

bracteosa sensu Rusby, 1907, non A. de Candolle, 1859.

subrectangula Rusby, 1934.

jussiaeicarpa Warburg, Bot. Jahrb. Syst., 22:33, 1895. Tropical West Africa. Fig. 14.48.

kaietukensis Tutin, J. Bot., 78:250, 1940.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:444, 1983.

= fischeri Schrank var. fischeri, 1820.

kalabenonensis Humbert, Bull. Soc. France, 118:739, pl. 1: figs. 9–13, "1971," 1973. Madagascar. Fig. 7.21.

kalbreyeri (Oliver) L.B. Smith & B.G. Schubert var. kalbreyeri, J. Wash. Acad. Sci., 45:113, 1955. Colombia. Fig. 18.25, icon.

Begoniella kalbreyeri Oliver, 1881.

kalbreyeri L.B. Smith & B.G. Schubert var. glabra L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:113, 1955. Colombia.

Begoniella kalbreyeri var. *glabra* L.B. Smith & B.G. Schubert, 1950.

kaniensis Irmscher, Bot. Jahrb. Syst., 50:373, 1913. New Guinea. Fig. 9.11.

karwinskyana A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:134, 1859.—K. Burt-Utley, Tulane Studies Zool. Bot., 25(1), 1985.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:468, 1984.

= fusca Liebmann, 1853.

kautskyana Handro, Loefgrenia, 74:1, 1981. Brazil. Sine figura.

kellermanii C. de Candolle, Smithson. Misc. Coll., 69(12):1, 1919.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:177, 1961.—J. Golding, Phytologia, 47:293, 1981. Guatemala. Fig. 3.44.

kelliana Irmscher, Notizbl. Bot. Gart. Berlin-Dahlem, 7:102, 1917. New Guinea. Sine figura.

keniensis Gilg ex Engler, Veg. Erde, 9(3.2):621, 1921. East Africa: Kenya, Uganda. Fig. 31.15.

kennedyi sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:63, 1974, sphalmate pro *plebeja* var. *kennedyi* Ziesenhenne, 1959.

kenworthyae Ziesenhenne, Begonian, 17:148, pl., 1950, "*kenworthyi.*" Mexico. Fig. 4.33.

keraudrenae Bosser, Fl. Madagascar, 144:59, pl. 3: figs. 2, 3, 1983. Madagascar. Editus sero pro clave.

kerrii Craib, Bull. Misc. Inform., 57, 1911. Siam. Fig. 7.20.

kerstingii Irmscher, Bot. Jahrb. Syst., 50:345, 1913. New Guinea. Fig. 14.46.

spilotophylla sensu Schumann & Lauterbach, 1901, non F. von Mueller, 1876.

khasiana C.B. Clarke in J.D. Hooker, Fl. Brit. India, 2:656, 1879. India: Himalaya. Sine figura.

pedunculosa sensu Wallich no. 3672B, 1831, non Wallich, 1830.

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Gireoudia lindleyana Klotzsch, 1854.

Gireoudia vitifolia Klotzsch, 1855.

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Isopteris longirostris Klotzsch, 1854.

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zenkeri Warburg ex Exell, 1929.

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aculeata Walpers, 1843.

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Tsjeria-narinampuli Rheede, 1689.

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mannii J.D. Hooker, Bot. Mag., vol. 90, pl. 5434, 1864. Tropical Africa. Fig. 14.20.

epiphytica J.D. Hooker, 1871.
excelsa J.D. Hooker, 1871.
oxyanthera Warburg, 1895.
parva Sprague, 1912.
edulis Gilg ex Engler, 1921.
spraguei Weber, 1968.

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mariae L.B. Smith, Phytologia, 27:213, pl. 2, 1973. Venezuela. Fig. 26.5.

marnieri Keraudren, Fl. Madagascar, 144:64, pl. 19, 1983. Madagascar. Editus sero pro clave.

marojejyensis Humbert, Mem. Inst. Sci. Madagascar, Ser. B., Biol. Veg., 6:112, 1955.—M. Keraudren-Aymonin, Fl. Madagascar, 144:60, pl. 17, 1983. Madagascar. Fig. 3.4.

martabanica A. de Candolle var. martabanica, Ann. Sci Nat. Bot., IV, 11:136, 1859. Burma. Fig. 11.4.

martabanica A. de Candolle var. pseudoclivalis Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:145, pl. 9, 1929. Malaya.

clivalis Ridley, 1910, pro parte.

martiana Link & Otto, Ic. Pl. Rar., 5:49, pl. 25, 1829.—A. de Candolle. Prodr., 15(1:)309, 1864.

= gracilis var. martiana A. de Candolle, 1864.

martiana sensu Schlechtendal, Linnaea, 5:604, 1830.—A. de Candolle, Prodr., 15(1): 309, 1864.

= incarnata Link & Otto var. incarnata, 1829.

martinicensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:123, 1859.—O.E. Schulz in Urban, Symb. Antil., 7:21, 1911 [= *macro-*

phylla Lamarck, 1785].—J. Golding, Phytologia, 45:246, 1980.

= obliqua Linnaeus var. obliqua, 1753.

martinii Léveillé, Bull. Soc. Agric. Sarthe, 39:323, 1904, "*martini*".—Irmscher in Handel-Mazzetti, Symb. Sin., 7:388, 1931 [= *sinensis* A. de Candolle, 1859].—Irmscher Mitt. Inst. Allg. Bot. Hamburg, 10:494, 1939.

= grandis subsp. sinensis Irmscher, 1939.

martynia hort., Floric. Cab. & Florist's Mag., 9:259, 1841. Descriptione inchoata.

masarangensis Irmscher, Bot. Jahrb. Syst., 50:368, 1913. Celebes. Fig. 21.45.

mascariensis Bojer, Hortus Maurit., 271, 1837, nomen nudum.

masoniana Irmscher, Begonian, 26:202–203, 231, 1959; Begonian, 38:52, 1971. China. Fig. S26.

maurandiae A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:119, 1859.—L.B. Smith & B.G. Schubert, Caldasia, 4:94, pl. 11, 1946. Colombia, Ecuador. Fig. 3.14.

hederacea A. de Candolle, 1859.

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De Wilde and Arends, Acta Bot. Neerl., 28:359, 1979. Fig. 16.14.

= loranthoides J.D. Hooker, 1871.

maxima hort. Berol. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 223, 1855; Begoniac., 103, 1855, pro syn. *Magnusia maxima* Klotzsch, 1854.—A. de Candolle, Prodr., 15(1:)334, 1864 [= *maxima* hort. ex A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:167, 1961.

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maxima hort. Schönbr. ex Klotzsch, Monatsber. Königl. Akad. Wiss. Berlin, 122, 1854, nomen nudum.

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maxwelliana King, J. Asiat. Soc. Bengal, pt. 2, Nat. Hist., 71:66, 1902. Malaya. Fig. 24.5.

mayasiana L.B. Smith & B.G. Schubert, Publ. Mus. Hist. Nat. "Javier Prado," Ser. B, Bot., 17:7, pl. 3, 1963. Peru. Fig. 3.36.

maynensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:126, 1859. Ecuador, Peru. Fig. 16.8.

mayombensis Irmscher, Bot. Jahrb. Syst., 81:181, 1961. Angola, Congo. Fig. 2.15.

mazae Ziesenhenne var. mazae, Begonian, 14:152, 1947. Mexico. Fig. 33.12.

mazae Ziesenhenne var. deminuta Ziesenhenne, Begonian, 48:309, 1980. Mexico.

mazae Ziesenhenne f. nigricans Ziesenhenne, Begonian, 48:309, 1980. Mexico.

mazae Ziesenhenne f. viridis Ziesenhenne, Begonian, 48:309, 1980. Mexico.

mearnsii Merrill, Philipp. J. Sci., 6:383, "1911," 1912. Philippines. Sine figura.

media Merrill & Perry, J. Arnold Arbor., 24:54, pl. 6a–c, 1943. New Guinea. Fig. 21.44.

medusae Linden, Cat., 1861, non visus. Assam.

megacarpa Merrill, Philipp. J. Sci., 9:378, 1914. Philippines. Fig. 9.21.

megalantha Merrill, Philipp. J. Sci., 10:47, 1915. Philippines. Fig. 19.28.

megaphylla A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:133, 1859.—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:28, 1945.

= barkeri Knowles & Wescott, 1840.

Obs: e plantis vidi fortasse species propria. J.G.

megaptera A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:134, 1859. Nepal, India, Burma. Fig. 34.11.

malabarica sensu Wallich, 1831, non Lamarck, 1785.

megapteroidea King, J. Asiat. Soc. Bengal, pt. 2, Nat. Hist., 71:65, 1902.—Koorders, Exkurs.-Fl. Java, 2:649, 1912 [= muricata Blume, 1827].—H.N. Ridley, Fl. Malay Penins., 5:862, 1925.

= venusta King, 1902.

meisneri Wallich, Num. List, 213, no. 6294, 1832, nomen nudum.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:645, 1879

[= *rubro-venia* var. *meisneri* C.B. Clarke, 1879].—J. Golding, Phytologia, 40:19, 1978.

= hatacoa var. meisneri J. Golding, 1978.

membranacea A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:139, 1859. Brazil. Fig. 22.38.

mengtzeana Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:536, 1939. China. Fig. 4.57.

meridensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:123, 1859; Prodr., 15(1:)292, 1864. Venezuela. Fig. 20.2.

moritziana Klotzsch, 1854, non Kunth & Bouché, 1848, non Klotzsch, 1855.

Wageneria moritziana Klotzsch, 1854.

merrillii Warburg in Perkins, Fragm. Flor. Philipp., 53, 1904.—Merrill, Philipp. J. Sci., 6:394, "1911," 1912.

= nigritarum Steudel, 1821.

merrittii Merrill, Philipp. J. Sci., 5:365, 1910. Philippines. Fig. 27.8.

metachroa Fotsch, Begonien, 41, pl. 2, 1933, fortasse taxa hybridogena.

involucrata var. *purpurascens* hort. ex Fotsch, 1933.

metallica W.G. Smith, Fl. Mag. (London), pl. 197, 1876.—Weber & Dress, Baileya, 16:124, pl. 4, 1968. Brazil. Fig. 4.18.

mexera hort., Floric. Cab. & Florist's Mag., 11:65, 1843. Descriptione inchoata.

mexiae Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 4:237, 1929.—fide K. Burt-Utley, Tulane Studies Zool. Bot., 25(1), 1985.

= stigmosa Lindley, 1845.

mexicana Karsten ex Fotsch, Begonien, 27, pl. 7, 1933. Mexico. Descriptione inchoata.

meyeniana Walpers, Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur., suppl., 2(19, suppl. 1):409, 1843.—O.E. Schultz in Urban, Symb. Antil., 7:27, 1911.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:468, 1984.

= humilis Dryander var. humilis, 1789.

meyeri Otto & Dietrich, Allg. Gartenzeitung, 4:349, 1836.—Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854 [= *Gurlitia meyeri* Klotzsch, 1854].—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.

= tomentosa var. eriocaulis A. de Candolle, 1861.

meyeri W.J. Hooker, Bot. Mag., vol. 70, pl. 4100, 1844, "*meyerii*," non Otto & Dietrich, 1836.—Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 189, 1855; Begoniac., 69, 1855 [= *Rachia meyeri* Klotzsch, 1855].—J. Doorenbos, Begonian, 41:168, 1974.

= sunorchis C. Chevalier, 1938.

meyeri-johannis Engler, Abh. Königl. Akad. Wiss. Berlin, 2:305, 1892. Tropical Africa. Fig. 12.8.

meyeri-johannis sensu Robyns, Fl. Sperm. Parc. Nat. Albert, 18:644, 1947, non Engler, 1892.—Wilczek, Fl. Congo, Rwanda, Burundi, 14, pl. 2, 47, 1969, pro parte.

= wollastonii Baker, 1908.

meysselliana Linden, Ill. Cat., 112:1, 1883. Sumatra. Descriptione inchoata.

michoacana L.B. Smith & B.G. Schubert, Contr. Gray Herb., 165:94, 1947. Mexico. Fig. 27.15.

micrantha Steudel, Nom. Bot., ed. 2, 1:194, 1840, nomen nudum.

= parviflora Poeppig & Endlicher, 1835.

micranthera Grisebach var. micranthera, Abh. Königl. Ges. Wiss. Gottingen, 19:148, 1874.—L.B. Smith & B.G. Schubert, Darwiniana, 5:90, pl. 4, 1941. Bolivia, Argentina. Fig. 28.33.

micranthera var. *typica* L.B. Smith & B.G. Schubert, 1941.

micranthera Grisebach var. fimbriata L.B. Smith & B.G. Schubert, Darwiniana, 5:98, pl. 9, 1941. Bolivia.

micranthera Grisebach var. foliosa L.B. Smith & B.G. Schubert, Darwiniana, 5:92, pl. 5, 1941. Bolivia, Argentina.

micranthera Grisebach var. hieronymi (Lindau) L.B. Smith & B.G. Schubert, Darwiniana, 5:96, pl. 7, 1941. Argentina.

coriacea sensu Grisebach, 1879, non Hasskarl, 1844, non A. de Candolle, 1859.

hieronymi Lindau, 1894.

micranthera Grisebach var. nana L.B. Smith & B.G. Schubert, Darwiniana, 5:94, pl. 6, 1941. Argentina.

micranthera Grisebach var. *typica* L.B. Smith & B.G. Schubert, Darwiniana, 5:92, 1941.
= micranthera Grisebach var. micranthera, 1874.

micranthera Grisebach var. venturii L.B. Smith & B.G. Schubert, Darwiniana, 5:97, pl. 8, 1941. Bolivia, Argentina.

micranthera Grisebach var. rhacophylla (Irmscher) L.B. Smith & D.C. Wasshausen, Phytologia, 54:467, 1984; Phytologia, 55:112, 1984. Argentina.
hieronymi var. *rhacophylla* Irmscher, 1949.

microcarpa A. de Candolle var. microcarpa, Prodr., 15(1:)311, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:83, pl. 9, 1946. Ecuador. Fig. 32.32.

microcarpa A. de Candolle var. acuta L.B. Smith & B.G. Schubert, Caldasia, 4:83, pl. 9, 1946. Colombia.

microcarpa A. de Candolle var. villosa L.B. Smith & B.G. Schubert, Caldasia, 4:84, pl. 9, 1946. Colombia.

microphylla herb. Willdenow ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 182, 1855; Begoniac., 62, 1855, pro syn. *Lepsia foliosa* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1:)375, 1864.
= foliosa Humboldt, Bonpland & Kunth var. foliosa, 1825.

microphylla A. de Candolle var. microphylla, Prodr., 15(1:)375, 1864, non Willdenow ex Klotzsch, 1855.—Irmscher, Bot. Jahrb. Syst., 50:573, pl. 4.21, 1914. Colombia, Venezuela, Fig. 18.2.
Lepsia microphylla Klotzsch, 1855.
Lepsia foliosa Klotzsch, pl. 5A, 1855.

microphylla A. de Candolle var. major L.B. Smith, Phytologia, 33:441, 1976. Venezuela.

microptera W.J. Hooker, Bot. Mag., vol. 83, pl. 4974, 1857. Borneo. Fig. 20.38, icon.

microsperma Warburg, Bot. Jahrb. Syst., 22:42, 1895. Cameroon. Fig. 2.6.

mildbraedii Gilg in Mildbraed, Wiss. Erg. Deut. Zentr. Afr. Exped. Bot., 2:574, 1913.—Wilczek, Fl. Congo, Rwanda, Burundi, 38, pl. 4, 1969.
= quadrialata Warburg var. quadrialata, 1895.

militaris L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:24, pl. 2, 1945. Central America: Guatemala. Fig. 3.5.

mindanaënsis Warburg in Perkins, Fragm. Flor. Philipp., 55, 1904. Philippines. Fig. 21.2.

mindorensis Merrill, Philipp. J. Sci., 6:396, "1911," 1912. Philippines. (Fig. 26.27.)
sordidissima Elmer, 1915. Fig. 26.27.

miniata Planchon & Linden, Fl. Serres Jard. Eur., I, 8:105, pl. 787, 1853.—A. de Candolle, Prodr., 15(1:)291, 1864.
= fuchsiodes var. miniata A. de Candolle, 1864.

minicarpa H. Hara, J. Jap. Bot., 47:112, pl. 2, 1972. India: Nepal. Fig. 12.7.
parviflora F. Hamilton ex Wallich, 1831, non Poeppig & Endlicher, 1835.
wallichiana Steudel, 1840.
modestiflora sensu C.B. Clarke, 1879, quoad pl. ex Nepal.

minima Beddome, Madras J. Lit. & Sci., III, 1:48, pl. 15., 1864; Icon. Pl. Ind. Or., 1:23, pl. 110, 1874.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:651, 1879.
= crenata Dryander, 1791.

minjemensis Irmscher, Bot. Jahrb. Syst., 50:375, pl. 4, 1913. New Guinea. Fig. 8.42.

minor Jacquin, Collectanea, 1:126, "1786," 1787; Icon. Pl. Rar., 3(5):18, pl. 618, "1786–1793," 1789. Jamaica. (Fig. 30.24.)
obliqua sensu L'Héritier, 1788, non Linnaeus, 1753.
nitida Dryander in Aiton, 1789. Fig. 30.24, icon.
obliqua sensu Schneevoogt, 1793, non Linnaeus, 1753.

nitida var. *discolor* Otto & Dietrich, 1836.

lucida Paxton, 1847.

nitida Dryander in Paxton, 1847.

suaveolens sensu Klotzsch, 1855, non Loddiges, 1817.

nitida var. *speciosa* Regel, 1856.

obliqua sensu Klotzsch, 1856, non Linnaeus, 1753.

speciosa hort. Berol. ex Klotzsch, 1856.

pulchra herb. Schreb. ex A. de Candolle, 1864.

speciosa hort. Van Houtte ex A. de Candolle, 1864.

minutifolia N. Hallé, Adansonia, II, 12:371, pl. 7, 1972. West Africa: Gabon. Fig. 6.18.

miranda Irmscher, Notes Roy. Bot. Gard. Edinburgh, 21:36, 1951. China. Fig. 4.36.

modesta Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 20, 1853.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:166, 1961 [= *franconis* Liebmann, 1853].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:443, 1983; Phytologia, 55:112, 1984.

= wallichiana Lehmann, 1850, non Steudel, 1840.

modestiflora Kurz, Flora, 54:296, 1871.—H. Hara, J. Jap. Bot., 47:133, 1972. Burma. Fig. 27.17.

modestiflora sensu C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:640, 1879, quoad pl. ex Nepal.—H. Hara, J. Jap. Bot., 47:112, 1972.

= minicarpa H. Hara, 1972.

modica Stapf, Bull. Misc. Inform., 259, 1908.—Engler, Veg. Erde, 9(3.2):617, 1921 [= *whytei* Stapf, 1905].—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:218, 1954.

= quadrialata Warburg var. quadrialata, 1895.

molinana Burt-Utley, Phytologia, 54:486, pl. 1, 1984. Honduras. Editus sero pro clave.

molleri (C. de Candolle) Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):141, 1894. Tropical West Africa: São Tomé. Fig. 16.28.

Mezierea molleri C. de Candolle, 1892.

subalpestris A. Chevalier, 1912.

mollicaulis Irmscher, Webbia, 12:507, 1957; Parey's Blumengart., ed. 2:87, 1960. South America. Fig. 31.23.

mollis A. de Candolle, Prodr., 15(1:)391, 1864. Java, Sumatra, Borneo. Fig. 2.37.

Empetrum acetosum f. *cordifolium* Rumphius, 1747.

repens Blume, 1827, non Lamarck, 1785.

Diploclinium repens Miquel, 1856.

Scheidweileria repens Hasskarl, 1858.

Mitschertichia repens Miquel, 1861.

saxatilis Reinwardt ex Koorders, 1912.

monadelpha Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854, pro syn. *Barya monadelpha* Klotzsch, 1854.—A. de Candolle, Prodr., 15(1:)286, 1864.

= monadelpha Ruiz & Pavon ex A. de Candolle, 1864.

monadelpha Ruiz & Pavon ex A. de Candolle, Prodr., 15(1:)286, 1864. Peru. Fig. 4.47, non typus.

monadelpha Ruiz ex Klotzsch, 1854.

Barya monadelpha Klotzsch, 1854.

monadelpha Ruiz & Pavon ex A. de Candolle subsp. glabriflora Irmscher, Bot. Jahrb. Syst., 76:73, 1953. Peru.

monantha Warburg in Schumann & Lauterbach, Nachtr. Deutsch. Schutzgeb. Südsee., 322, 1905.—Irmscher, Bot. Jahrb. Syst., 50:573, 1914. New Guinea. Sine figura.

monicae Aymonin & Bosser, Fl. Madagascar, 144:19, pl. 3: fig. 1, 1983. Madagascar. Editus sero pro clave.

monophylla Pavon ex A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:121, 1859. Mexico. Fig. 7.9.

unifolia Rose ex Trelease, 1904.

monophylla Pourr. ex A. de Candolle, Prodr., 15(1:)403, 1864, non *Begonia* sed *Orchidacea*.

monoptera Link & Otto, Icon. Pl. Rar., 3:27, pl. 14, 1828.—W.J. Hooker, Bot. Mag., vol. 64, pl. 3564, 1837.—C. Karegeannes, Begonian, 50:9, 1983.

= balmisiana Balmis var. balmisiana, 1794.

montana (A. de Candolle) Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894. Venezuela. Fig. 14.26.

Casparya montana A. de Candolle, 1859.

monterosae A. Chevalier, Sudania, II: 51, 1914, nomen nudum, non visus.—Exell, Cat. Vas. Pl. S. Tomé, 187, 1944.

= annobonensis A. de Candolle, 1859.

monticola C. de Candolle, Bull. Herb. Boissier, II, 8:325, 1908.—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.

= urticae Linnaeus f. var. urticae, 1781.

monticola Ridley, J. Fed. Malay States Mus., 5:34, 1914, non C. de Candolle, 1908.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= alpina L.B. Smith & D.C. Wasshausen, 1984.

montis-bismarckii Warburg in Schumann & Lauterbach, Nachtr. Deutsch. Schutzgeb. Südsee, 322, 1905. New Guinea. Fig. 18.23.

morelii Irmscher, Begonian, 29:47, 56, 1962, nomen nudum.—C. Karegeannes, Begonian, 42:295, 1975.

= morelii Irmscher ex C. Karegeannes, 1975.

morelii Irmscher ex C. Karegeannes, Begonian, 42:293–295, pl., 1975; Begonian, 43:26, 1976. Fig. 8.43.

morelii Irmscher, 1962.

morifolia Yü, Bull. Fan. Mem. Inst. Biol., n.s., 1:119, 1948. China. Sine figura.

morii Burt-Utley, Britonnia, 34:192, pl. 3, 1982. Central America: Panama. Fig. 22.41.

moritziana Kunth & Bouché, Ind. Sem. hort. Berol. 1848 Coll., p. 16, 1849.—A. de Candolle, Prodr., 15(1:)362, 1864 [= *scandens* Swartz, 1788].—O.E. Schulz in Urban, Symb. Antil., 7:5, 1911.

= glabra Aublet var. glabra, 1775.

moritziana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854, nomen nudum, non Kunth & Bouché, 1849, non Klotzsch, 1855.—A. de Candolle, Prodr., 15(1:)292, 1864.

= meridensis A. de Candolle, 1859.

moritziana Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 151, 1855; Begoniac., 31, 1855.—A. de Candolle, Prodr., 15(1:)303, 1864 [= *tovarensis* Klotzsch, 1855].—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 40:245, 1950 [= *patula* Haworth, 1819].—L.B. Smith & B.G. Schubert, Ann. Missouri Bot. Gard., 45:57, 1958 [= fischeri var. tovarensis Irmscher, 1953].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= fischeri Schrank var. fischeri, 1820.

morsei Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:554, 1939. China. Fig. 24.33

moszkowskii Irmscher, Bot. Jahrb. Syst., 50:341, 1913. New Guinea. Fig. 18.36.

mouhotiana Hosseus, Bot. Centralbl., 28:415, 1911, nomen nudum. Siam.

moulmeinensis C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:643, 1879. Burma. Fig. 8.11

moysesii Brade, Arq. Bot. Estado São Paulo, n.s., 3:209, pl. 52, 1958. Brazil. Fig. 34.5.

mucronistipula C. de Candolle, Smithsonian Misc. Collect., 69(12):3, 1919. Panama. Fig. 24.15.

muliensis Yü, Bull. Fan. Mem. Inst. Biol., n.s., 1:119, 1948. China. Fig. 5.4.

multangula Blume var. multangula, Enum. Pl. Java, 1:96, 1827.—A. de Candolle, Prodr., 15(1:)275, 1864 [= *Casparya multangula* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894. Java. Fig. 4.16.

discolor sensu Blume, 1827.

Platycentrum multangulum Miquel, 1856.

Sphenanthera multangula Klotzsch, 1857.

robusta Zollinger ex Klotzsch, 1857.

Casparya multangula A. de Candolle, 1864.

grandis Reinwardt ex Koorders, 1912.

multangula Blume var. glabrata Miquel, Fl. Jungh. 4:418, "1855," 1857; Fl. Ned. Ind. 1, 2.695, 1856, pro syn. *Platycentrum multangulum* var. *glabrata* Miquel, 1856.—Klotzsch, Bot. Zeitung, 15:182, 1857 [= *Sphenanthera multangula* var. *glabrata* Klotzsch, 1857].—A. de Candolle, Prodr., 15(1:)276, 1864 [= *Casparya multangula* var. *glabrata* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894, nomen legitimum. Java.

multibulbillosa Martius ex Steudel, Nom. Bot., ed., 2, 1:194, 1840, nomen nudum. Brazil.

multidentata Warburg in Schumann & Lauterbach, Nachtr. Deutsch. Schutzgeb. Südsee, 322, 1905. New Guinea. Fig. 19.3.

multiflora Bentham, Pl. Hartw., 185, 1845. Colombia. Fig. 17.32.

multinervia Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 18, 1853.—J. Golding, Phytologia, 40:457, 1978. Central America: Costa Rica, Panama. Fig. 32.27.

Gireoudia multinervia Klotzsch, 1854.

glandulosa sensu A. DeCandolle, 1864, non W.J. Hooker, 1861, nomen confusum.

Wageneria glandulosa Klotzsch, herb. Berol. ex A. de Candolle, 1864.

cuspidata C. de Candolle, 1896.

muricata Blume, Catalogus, 103, 1823; Enum. Pl. Javae, 95, 1827. Indonesia. Fig. 22.13.

Empetrum acetosum f. *album* Rumphius, 1747.

Empetrum acetosum f. *rubrum* Rumphius, 1747.

tuberosa Lamarck, 1789.

rubra Blume, 1827.

saxatilis Blume, 1827.

Diploclinium tuberosum Miquel, 1856.

Diploclinium rubrum Miquel, 1856.

Diploclinium saxatile Miquel, 1856.

Sphenanthera robusta Hasskarl var. *rubra* Hasskarl, 1858.

Casparya robusta A. de Candolle var. *rubra* A. de Candolle, 1864.

robusta Blume var. *rubra* Warburg, 1894.

forbesii Vuijck ex Koorders, 1912.

glabra Vuijck ex Koorders, 1912.

rumphii Vuijck ex Koorders, 1912.

muricata Scheidweiler, Allg. Gartenzeitung, 9:156, 1841, non Blume, 1823.—Walpers, Repert. Bot. Syst., 2:209, 1843.

= pentaphylla Walpers, 1843.

muricata sensu Koorders, Exkurs.-Fl., 2:648, 1912. Descriptione inchoata sed haud muricata Blume, 1823.

murina Craib, Gard. Chron., III, 83:66, 1928. Siam. Fig. 32.16.

muroptera hort., Horticulturist, 14:418, 1857, non visus.

murudensis Merrill, Sarawak Mus. J., 3:530, 1928. Borneo. Fig. S32.

mutabilis Harland, J. Roy. Hort. Soc., 1862, non visus.

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mystacina L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984. New Guinea. Fig. S22.

richardsoniana Merrill & Perry, 1943.

nana l'Heritier, Stirp. Nov., 99, pl. 48, 1788. Madagascar. Fig. 13.14.

warpurii Hemsley, 1900.

natalensis W.J. Hooker, Bot. Mag., vol. 81, pl. 4841, 1855.—Hilliard in Ross, Fl. South. Afr., 22:142, 1976.

= dregei Otto & Dietrich var. dregei, 1836.

naumoniensis Irmscher, Bot. Jahrb. Syst., 50:362, pl. 3, 1913. New Guinea. Fig. 18.13.

ndongensis Engler, Veg. Erde, 9(3.2):619, 1921. West Africa: Cameroon. Fig. 9.17.

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neglecta A. de Candolle var. caulescens A. de Candolle in Martius, Fl. Bras., 4(1):372, 1861. Brazil.

negrosensis Elmer, Leafl. Philipp. Bot., 2:736, 1910. Philippines. Fig. 30.52.

nelumbiifolia Schlechtendal & Chamisso, Linnaea, 5:604, 1830. Mexico to Colombia. Fig. 2.27.
deryckxiana Lemaire, 1844.
Gireoudia nelumbiifolia Klotzsch, 1854.
hernandiifolia hort. Berol. ex Klotzsch, 1854, non W.J. Hooker, 1852.
peltata Sessé & Mociño, 1894, non Otto & Dietrich, 1841.
caudilimba C. de Candolle, 1919.

nemophila Kurz, J. Asiat. Soc. Beng., 46(2):108, 1877.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:646, 1879.
= cathcartii J.D. Hooker & Thomson, 1855.

nemoralis L.B. Smith & B.G. Schubert, Contr. Gray Herb., 165:93, 1947. Mexico. Fig. 28.38.

neococcinea (Ruiz & Pavon) Van den Heede, Les Begonia, 86, 1903, nomen nudum.

neocomensium A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:138, 1859. Brazil. Fig. 31.9.

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purpurea Elmer, 1939, non Swartz, 1788.

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Mezierea nepalensis A. de Candolle, 1859.
gigantea Wallich ex C.B. Clarke, 1879.

nepalensis Warburg var. micropteron (A. de Candolle) J. Doorenbos, Check List Begonia Sp., 35, 1971, ined.—J. Doorenbos ex F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:85, 1974. India: Sikkim.
Mezierea nepalensis var. *micropteron* A. de Candolle, 1864.

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nervosa hort. Paris ex Humboldt, Bonpland & Kunth, Nov. Gen. Sp., 7, folio 136, quarto 177, 1825, nomen nudum.

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= heracleifolia Schlectendal & Chamisso var. heracleifolia, 1830.

nigricans hort. Berol. ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 215, 1855; Begoniac., 95, 1855, pro syn. *Gireoudia heracleifolia* var. *punctata* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1): 335, 1864.
= heracleifolia var. punctata A. de Candolle, 1864.

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subpeltata var. *nigricans* hort. ex L.H. Bailey, 1923.

nigritarum (Kamel) Steudel, Nom. Bot., 1:104, 1821. Philippines. Fig. 23.26.
Acetosa nigritarum Kamel, 1704.
capensis Blanco, 1837.
rhombicarpa A. de Candolle, 1859.
rhombicarpa var. *lobbii* A. de Candolle, 1859.
merrillii Warburg in Perkins, 1904.

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= pinetorum A. de Candolle, 1859.

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= pinetorum A. de Candolle, 1859.

nitida Dryander in Aiton, Hort. Kew., 3:352, 1789.—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.
= minor Jacquin, 1787.

nitida Dryander, Paxton's Mag. Bot., 13:77, pl., 1847, nomen iconis sphalmate *lucida*, non odorata Willdenow, 1813.—O.E. Schulz in Urban Symb. Antil., 7:9, 19, 1911.
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nitida var. *discolor* Otto & Dietrich, Allg. Gartenzeitung, 4:354, 1836.—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.
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= obliqua Linnaeus var. obliqua, 1753?

nitida var. *speciosa* Regel, Ind. Semin. Petrop., 34, 1856.—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.
= minor Jacquin, 1787.

nitida Wikstrom, Guadel., 76, 1828, non visus.—O.E. Schulz in Urban, Symb. Antil., 7:19, 1911, non Dryander in Aiton, 1789.
= odorata Willdenow, 1813.

nitida Griesebach, Syst. Veg. Karaiben., 221, 1857, non visus.—O.E. Schulz in Urban, Symb. Antil., 7:20, 1911, quoad pl. Barth; non Dryander in Aiton, 1789.
= retusa O.E. Schulz, 1911.

nivea Parish ex Kurz, J. Asiat. Soc. Bengal, 42(2):81, 1873. Burma. Fig. 13.10.

nobilis hort., Horticulturist, 15:40, 1860, non visus.

nomonyma hort., Florist Hort. J., 2:196, 1853, nomen nudum. Brazil.

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notata Craib, Gard. Chron., III, 83:66, 1928. Siam. Sine figura.

notiophila Urban, Ark. Bot., 23A(5):90, 1930. Haiti. Fig. 30.25.

novogranatae A. de Candolle, Prodr., 15(1):517, 1864. Colombia? (Fig. 23.19.)
rosacea Linden ex A. de Candolle, 1864, non Putzeys, 1857.
quetamensis L.B. Smith & B.G. Schubert, 1946. Fig. 23.19.
inanis Irmscher, 1949.
rosacea sensu L.B. Smith, 1973, pro parte, non Putzeys, 1857.

novoguineensis Merrill & Perry, J. Arnold Arbor., 24:57, pl. 7.a,b, 1943. New Guinea. Fig. 28.51.

nubicola L.B. Smith & B.G. Schubert, Mem. New York Bot. Gard., 9:354, pl. 65A. 1957. Venezuela. Fig. 27.41.

nuda Irmscher, Bot. Jahrb. Syst., 76:58, 1953. Brazil. Fig. 20.26.

nummulariifolia Putzeys, Bot. Zeitung (Berlin), 11(40):716, 1853, "*nummulariaefolia.*" Colombia. Descriptione inchoata.

nurii Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:95, 1929. Malaya. Fig. 7.11.

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1961. Africa: Nyassaland. Fig. 31.13.

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luxii C. de Candolle, 1895.
luxii var. *pilosior* C. de Candolle, 1896.
serrulatoala C. de Candolle, 1908.
pubipedicella C. de Candolle, 1919.

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plagiata Linden ex A. de Candolle, 1864.

oaxacana A. de Candolle var. stenoptera L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:177, 1961. Costa Rica, Panama.

stenoptera C. de Candolle, 1919.

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obliqua Linnaeus var. obliqua, Species Plantarum, 2:1056, 1753, excl. syn. Sloane.—J. Golding, Phytologia, 45:221, 1980. Southern Lesser Antilles: Martinique. Fig. 32.14.

Begonia purpurea maxima, folio aurito Plumier in Tournefort, 1700.
Begonia nivea maxima, folio aurito Plumier in Tournefort, 1700.
obliqua sensu Jacquin, 1767.
macrophylla Lamarck, 1785.
grandifolia Jacquin, 1787.
discolor Sprengel, 1825.
crenata Maycock, 1830.
martinicensis A. de Candolle, 1859.
rotundifolia Grisebach, 1860, non Lamarck, 1785.
?*nitida* var. *pilosula* A. de Candolle, 1864.

obliqua Linnaeus var. *beta* Linnaeus, Species Plantarum, 2:1056, 1753.—O.E. Schulz in Urban, Symb. Antil., 7:15, 1911.—J. Golding, Phytologia, 45:247, 1980.

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obliqua Linnaeus var. *gamma* Linnaeus, Species Plantarum, 2:1056, 1753.—Plumier in Burman, Pl. Amer., 2, pl. 45: fig. 2, 1756.—J. Golding, Phytologia, 39:115, 1978.

= repens Lamarck var. repens, 1785.

obliqua Linnaeus var. *delta* Linnaeus, Species Plantarum, 2:1056, 1753.—Plumier in Burman, Pl. Amer., 2, pl. 45: main fig., 1756.—J. Golding, Phytologia, 45:247, 1980.

= rotundifolia Lamarck, 1785.

obliqua Linnaeus var. *epsilon* Linnaeus, Species Plantarum, 2:1056, 1753.—Plumier in Burman, Pl. Amer., 2, pl. 45: fig. 3, 1756.—A. de Candolle, Prodr., 15(1): 295, 1964.

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obliqua Linnaeus var. *zeta* Linnaeus, Species Plantarum, 2:1056, 1753.—Aublet, Hist. Pl. Guiane, 2:913, pl. 348, 1775.

= hirsuta Aublet, 1775.

obliqua Linnaeus, Mantissa Pl. Alt., 502, 1771, non Linnaeus, 1753.—Linnaeus f., Suppl. Pl., 420, 1782.

= capensis Linnaeus f., 1782.

obliqua sensu Jacquin, Observ. Bot., 2:11, 1767; Collectanea, 1:128, 1787 [= *grandifolia* Jacquin, 1787].—Dryander, Trans. Linn. Soc., 1:164, 1791 [= *macrophylla* Lamarck, 1785].—J. Golding, Phytologia, 45:251, 1980.

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obliqua sensu Thunberg, Fl. Jap., 231, 1784, non Linnaeus, 1753.—Dryander, Trans. Linn. Soc., 1:164, 1791 [= grandis Dryander, 1791].—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939.

= grandis subsp. evansiana Irmscher, 1939.

obliqua sensu L'Héritier, Stirpes Nova, 2, pl. 46, 1788, non Linnaeus, 1753.—Dryander, Trans. Linn. Soc., 1:159, 1791 [= *nitida* Dryander in Aiton, 1789].—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.

= minor Jacquin 1787.

obliqua sensu Schneevoogt, Icon. Pl. Rar., pl. 24, 1793, non Linnaeus, 1753.—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.

= minor Jacquin, 1787.

obliqua Vellozo, Fl. Flum., vol. 10, pl. 48, "1827," 1831, icon; non Linnaeus, 1753; Arch. Mus. Nac. Rio de Janeiro, 5:406, 1881, descr.—L.B. Smith and B.G. Schubert, J. Wash. Acad. Sci., 40(8):245, 1950 [= *patula* Haworth, 1819].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= fischeri Schrank var. fischeri, 1820.

obliqua Ruiz ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 221, 1855; Begoniac., 101, 1855, non Linnaeus, 1753; pro syn. *Cyathocnemis obliqua* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1): 333, 1864.

= cyathophora Poeppig & Endlicher, 1835.

obliqua sensu Klotzsch, Ind. Sem. hort. Berol., app. 1, 1856, non Linnaeus, 1753; Ann. Sci. Nat., IV, 6:350, 1856.—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.

= minor Jacquin, 1787.

obliqua sensu Van den Heede, Les Begonia, 7:59, 65, 145, pl. 6, 1903, non Linnaeus, 1753 [= *acuminata* Dryander, 1791].—O.E. Schulz in Urban, Symb. Antil., 7:13, 1911.

= acutifolia Jacquin, 1787.

oblongata Merrill, Phillipp. J. Sci., 7:310, 1912. Philippines. Fig. 20.17.

oblongifolia Stapf, Trans. Linn. Soc., II, 4:165, 1894. Borneo. Fig. S21.

obovatistipula C. de Candolle, Bull. Soc. Geneve, II, 6:124, pl. 6, 1914. Paraguay. Fig. 12.23.

obovoidea Craib, Bull. Misc. Inform., 413, 1930. Siam. Fig. 4.39.

obscura Brade, Arq. Jard. Bot. Rio de Janeiro, 15:33, pl. 3, 1957. Brazil. Fig. 29.1.

obsolescens Irmscher, Notes Roy. Bot. Gard. Edinburgh, 21:37, 1951. China. Sine figura.

obtecticaulis Irmscher, Bot. Jahrb. Syst., 74:600, 1949. Peru. Fig. 20.9.

obtusifolia Merrill, Philipp. J. Sci., 14:425, 1919. Philippines. Fig. 26.26.

obversa C.B. Clarke, J. Linn. Soc., Bot., 25:26, pl. 12, 1890. India. Fig. 8.2.

occhionii Brade, Arq. Serv. Forest., 2:21, pl. 1, 1943. Brazil. Fig. 29.22.

octopetala L'Héritier var. octopetala, Stirp. Nov., 101, 1788.—W.J. Hooker, Bot. Mag., vol. 64, pl. 3559, 1837. Ecuador, Peru. Fig. 4.14, icon.

grandiflora Knowles & Westcott, 1837.

Huszia octopetala Klotzsch, 1854.

octopetala subsp. ovatiformis Irmscher, Bot. Jahrb. Syst., 76:75, 1953. Peru.

octopetala sensu Grisebach, Abh. Königl. Ges. Wiss. Göttingen, 19:148, 1874.—L.B. Smith & B.G. Schubert, Darwiniana, 5:85, 1941.

= rubricaulis W.J. Hooker var. rubricaulis, 1844.

odeteiantha Handro, Loefgrenia, 39:4, 1969. Brazil. Fig. 20.27.

odorata Willdenow, Enum. hort. Berol., suppl., 64, 1813. Lesser Antilles: Guadeloupe. Fig. 32.35.

suaveolens Loddiges, 1817.

humilis sensu Ker-Gawler, 1818.

macrophylla Wikstrom, 1828, non Lamarck, 1785.

nitida Wikstrom, 1828, non Dryander in Aiton, 1789.

disticha hort. Berol. ex Klotzsch, 1854, non Link, 1822.

wagenerana W.J. Hooker, pl. 5047, 1858, non W.J. Hooker, pl. 4988, 1857.

dominicalis sensu Duss, 1897, non A. de Candolle, 1864.

odoratissima hort., J. Soc. Nat. Hort. France, IV, 27:265, 1926, pro syn. baumannii Lemoine, 1890.

ohlendorfiana sensu Buxton Check List Begonias, 176, 1957, sphalmate pro *platanifolia* var. *ohlendorffiana* H.G. Reichenbach f., 1878.

olbia Kerchove, Rev. Hort. Belge Étrangerè, 9:241, pl., 1883. Brazil. Fig. S40.

platanifolia var. *ohlendorffiana* H.G. Reichenbach f., 1878.

oligandra Merrill & Perry, J. Arnold Arbor., 24:44, pl. 2.g–k, 1943. New Guinea. Fig. 5.12.

oligantha Merrill, Philipp. J. Sci., 10:50, 1915. Philippines. Fig. 18.8.

oligocarpa A. de Candolle ex Koorders, Meded. Lands Plantentuin, 19:486, 1898. India: Himalaya. Descriptione inchoata.

oligophylla Blume ex Miquel, Fl. Ned. Ind., 1(1):692, 1856. East Indies. Descriptione inchoata.

oliveri L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:113, 1955. Colombia. Fig. 17.7.

Begoniella whitei Oliver, 1873.

olsoniae L.B. Smith & B.G. Schubert, Phytologia, 12:250, 1965. Brazil. Fig. 24.20.

vellozoana Brade, 1948, non Walpers, 1843.

ophiogyna L.B. Smith & B.G. Schubert, Caldasia, 4:84, pl. 9, 1946. Colombia. Fig. 27.6.

opuliflora Putzeys, Fl. des Serres, I, 10:71, pl. 995, 1855.—emend. L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983. Central America: Panama. Fig. 17.23.

opulifolia Loudon, Encyc. Pl., 1840, non visus.

orbiculata Jack, Malay. Misc., 2(7):9, 1822, Sumatra. Sine figura.

Diploclinium orbiculatum Miquel, 1856.

orchidiflora Griffith, Itin. Pl. Khasyah Mts. (Posthumous Papers), 2:38, 1848. India. Sine figura.

oregana hort. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, pro syn. *Pritzelia ramentacea* Klotzsch, 1854.—A. de Candolle, Prodr., 15(1): 357, 1864.

= ramentacea Paxton, 1846.

organensis Brade, Bol. Mus. Nac. Rio de Janeiro, Bot., 1:13, pl. 4, 1944. Brazil. Fig. 23.28.

ornithocarpa Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 4:238, 1929. Mexico. Fig. 32.7.

ornithophylla Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:556, 1939. China. Fig. 24.4

otophora Merrill & Perry, J. Arnold Arbor., 24:46, pl. 21, 1943. New Guinea. Fig. 21.10.

otophylla L.B. Smith & B.G. Schubert, Fieldiana: Bot., 28:417, pl. 89, 1952. Venezuela. Fig. 29.9.

ottonis hort. Bogor. ex A. de Candolle, Prodr., 15(1):399, 1864, pro syn. complicata A. de Candolle, 1864.

ottonis Walpers, Repert. Bot. Syst., 2:212, 1843.—Heynold, Nom. Bot., 2:63, 1846 [= *walpersii* Heynold, 1846].—L.B. Smith & B.G. Schubert, Caldasia, 4:184, 1946.

= guaduensis Humboldt, Bonpland & Kunth var. guaduensis, 1825.

Obs.: e plantis cultis vidi fortasse species propria. J.G.

ovatifolia A. de Candolle var. ovatifolia, Ann. Sci. Nat. Bot., IV, 11:132, 1859. India. Fig. 8.19.

subovata Wallich, 1831, nomen nudum.

ovatifolia A. de Candolle var. cretacea C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:643, 1879. India.

oxyanthera Warburg, Bot. Jahrb. Syst., 22:35, 1895.—Engler, Veg. Erde, 9(3.2):619, 1921 [= *excelsa* J.D. Hooker, 1871].—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:220, 1954.

= mannii J.D. Hooker, 1864.

oxyloba Welwitsch ex J.D. Hooker in Oliver, Fl. Trop. Afr., 2:573, 1871. Tropical Africa. Fig. 4.42.

heddei Warburg, 1900.
lehmbachii Warburg, 1900.
conraui Gilg, 1904.
kummerae Gilg, 1904.
petrophila Gilg, 1904.
togoensis Gilg, 1904.
seretii De Wildeman, 1907.
sassandrensis A. Chevalier, 1911.

oxyphylla A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:140, 1859. Brazil. Fig. 16.6.

oxysperma A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:122, 1859. Philippines? Sine figura.

oxyura Merrill & Perry, J. Arnold Arbor., 24:49, pl. 4a,b, 1943. New Guinea. Fig. 21.48.

pachyrhachis L.B. Smith & D.C. Wasshausen, Phytologia, 52:442, 1983. Indonesia: Java? Fig. 1.1.

Casparya crassicaulis A. de Candolle, 1859.

crassicaulis Warburg, 1894, non Lindley, 1842.

padangensis Irmscher, Webbia, 9:475, pl. 1, 1953. Sumatra. Fig. 21.33.

palawanensis Merrill, Philipp. J. Sci., 6:380, "1911," 1912. Philippines. Fig. 16.29.

paleacea Kurz, Flora, 514:297, 1871. Burma. Fig. 28.36.

paleata Schott ex A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:137, 1859. Brazil. Fig. 31.10.

palmaris A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:126, 1859.—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:28, 1945.

= biserrata Lindley var. biserrata, 1847.

palmaris A. de Candolle var. *jurgensenii* A. de Candolle, Prodr., 15(1):307, 1864.—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:28, 1945.

= biserrata Lindley var. biserrata, 1847.

palmata D. Don var. palmata, Prodr. Fl. Nep., 223, 1825.—H. Hara, Fl. E. Himalaya, 215, 1966; Photo-Album Pl. E. Himalaya, 7, pl. 60, 1968. India. Fig. 4.58.

laciniata Roxburgh ex Wallich, 1831, nomen nudum.

laciniata Roxburgh, 1832.

roylei K. Koch, 1857.

laciniata var. *tuberculosa* C.B. Clarke, 1879.

laciniata var. *nepalensis* A. de Candolle, 1864.

ferruginea Hayata, 1911, non Linnaeus f., 1781.

randaiensis Sasaki, 1928.

laciniata subsp. *nepalensis* Irmscher, 1939.

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Doratometra bowringiana Seemann, 1857.

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paranaënsis Brade, Bol. Mus. Nac. Rio de Janeiro, Bot., 1:10, pl. 1, 1944. Brazil. Fig. S6.

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nervidens Irmscher, 1949.

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Scheidweileria parviflora Klotzsch, 1855.
gunnerifolia Linden, 1875.
myriantha Britton, 1891.

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schottiana A. de Candolle, 1859.

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velutina Parish ex Kurz, 1873.

parvuliflora A. de Candolle var. pubescens A. de Candolle, Prodr., 15(1):355, 1864. Singapore.

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patula Haworth, Succ. Pl. Suppl., 100, May 1819. Descriptione inchoata.

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croptera Klotzsch, 1855].—L.B. Smith & D.C. Wasshausen, Phytologia, 44:246, 1979.

= fischeri Schrank var. fischeri, 1820.

patula sensu Klotzsch, Abh. Königl. Akad. Wiss. Berlin, "1854," 1855, non Haworth, 1819; Begoniac., 30, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):348, 1861, excl. syn. *pauciflora* Lindley, 1820.—L.B. Smith & D.C. Wasshausen, Phytologia, 44:246, 1979.

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pavonina Ridley, J. Fed. Malay States Mus., 4:22, 1909. Malaya. Fig. 24.8.

pearcei J.D. Hooker, Bot. Mag., vol. 91, pl. 5545, 1865. Bolivia. Fig. 28.46.

pedata Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 10, 1853, Mexico. Fig. 5.22.

Knesebeckia pedata Klotzsch, 1855.

Knesebeckia crenatiflora sensu L.B. Smith & D.C Wasshausen, 1984, non Klotzsch & Putzeys, 1855.

pedatifida Léveillé var. pedatifida, Repert. Nov. Sp., 7:21, 1909. China. Fig. 4.40.

pedatifida Léveillé var. *kewensis* Léveillé, Repert. Nov. Sp., 7:22, 1909.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:540, 1939.

= lipingensis Irmscher, 1927.

pediophylla Merrill & Perry, J. Arnold Arbor., 24:54, pl. 5j–n, 1943. New Guinea. Fig. 27.19.

pedunculosa Wallich, Pl. As. Rar., 1:82, pl. 97, 1830; Num. List, 129, no. 3672A, 1831.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:639, 1879. India. Fig. 27.34.

pedunculosa sensu Wallich, Num. List, 129, no. 3672B, 1831, non Wallich, 1830.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:656, 1879.—J. Golding, Phytologia, 40:8, 1978.

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peekelii Irmscher, Bot. Jahrb. Syst., 50:360, 1913. Bismarck Archipelago. Fig. 25.7.

peltata Otto & Dietrich var. peltata, Allg. Gartenzeitung, 9:58, Feb. 1841.—Alexander, Addisonia, 23(4):53, pl. 763, 1959.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24(1):177, 1961.—J. Golding, Phytologia, 47:291, 1981. Mexico, Guatemala. Fig. 3.43, non typus.

incana Lindley, May 1841.

Rachia peltata Klotzsch, 1854.

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Rachia incana Klotzsch, 1855.

incana var. *auriformis* A. de Candolle 1864.

peltata Hasskarl, Tijdschr., 10:133, 1843; Cat. Hort. Bot. Bogor., 192, 311, 1844, non Otto & Dietrich, 1841.

= coriacea Hasskarl, 1844.

peltata A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:138, 1859, non Otto & Dietrich, 1841; in Martius, Fl. Bras., 4(1):370, 1861.

= concinna Schott, 1827.

peltata Sessé & Mociño, Fl. Mex., ed. 2:219, 1894, non Otto & Dietrich, 1841.—L.B.

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peltata sensu A.T. Brongniart ex Cels, Ann. Fl. Pomone, 106, 1842. Descriptione inchoata.

peltata Elmer, Leafl. Philipp. Bot., 7:2556, 1915, non Otto & Dietrich, 1841.—Merrill, Philipp. J. Sci. Bot., 13(1):39, 1918.

= elmeri Merrill, 1918.

peltatifolia Li, J. Arnold Arbor., 25:209, 1944. China. Fig. 2.26.

peltifolia Schott in Sprengel, Syst. Veg., 4(App.):408, 1827. Brazil. Fig. 2.45.

parvipeltata A. de Candolle, 1859.

peltigera Irmscher, Bot. Jahrb. Syst., 76:79, 1953. Peru. Fig. 32.10.

pendula Ridley, J. Straits Branch Roy. Asiat. Soc., 46:257, 1906. Borneo. Sine figura.

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peninsulae subsp. tambelanensis Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:100, 1929. Malaya. Fig. 2.33.

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pennellii L.B. Smith & B.G. Schubert var. *longiloba* Irmscher, Bot. Jahrb. Syst., 76:85, 1953.—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.

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pensilis L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984. West Indies: St. Vincent. Fig. S29.

pendula O.E. Schulz in Urban, 1911, non Ridley, 1906.

pentaphragmifolia Ridley, Trans. Linn. Soc. London, Bot., II, 9:59, 1916. New Guinea. Fig. 12.2.

pentaphylla Walpers, Repert. Bot. Syst., 2:209, 1843. Brazil. Fig. 4.2.

muricata Scheidweiler, 1841, non Blume, 1823.

digitata hort. ex Lemaire, 1851, non Raddi, 1820.

Scheidweileria muricata Klotzsch, 1854.

scheidweilera Koorders, 1912.

peperomioides J.D. Hooker in Oliver, Fl. Trop. Afr., 2:575, 1871. Tropical West Africa. Fig. 13.1.

peponifolia A.T. Brongniart ex F. Cels, Ann. Fl. Pomone, 105, 1842.—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984. Fig. 22.33

= barkeri Knowles & Wescott, 1840.

peponifolia A.T. Brongniart var. *beta* A.T. Brongniart ex F. Cels, Ann. Fl. Pomone, 106, 1842.—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.

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peponifolia hort. ex Schlechtendal, Linnaea, 24:180, 1851.—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.

= barkeri Knowles & Wescott, 1840.

peponifolia hort. Berol. ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 216, 1855; Begoniac., 96, 1855, pro syn. *Gireoudia macrophylla* var. *discolor* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):341, 1864 [= *peponifolia* Visiani ex A. de Candolle, 1864].—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.

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perakensis King var. perakensis, J. Asiat. Soc. Bengal., pt. 2, Nat. Hist., 71:64, 1902. Malaya. Fig. 13.12.

perakensis King var. conjungens Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:129, 1929. Malaya.

perakensis King var. rotundata Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:129, pl. 5, 1929. Malaya.

per-dusenii Brade, Arq. Jard. Bot. Rio de Janeiro, 12:10, pls. 3, 5: figs. 22–31, 1952. Brazil. Fig. 31.22.

brasiliensis sensu L.B. Smith & B.G. Schubert, 1941.

chapecoensis Brade, 1958.

schubertiana Irmscher, 1959.

peristegia Stapf, Bull. Misc. Inform., 140, 1901. Brazil. Fig. 30.48.

pernambucensis Brade, Arq. Jard. Bot. Rio de Janeiro, 13:82, pl. 7, 1954. Brazil. Fig. 24.19.

perpusilla A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:143, 1859. Madagascar. Fig. 8.23.

perrieri Bois in Lecomte, Notul. Syst., 3:107, pl., 1915. Madagascar. Fig. 33.6.

perryae L.B. Smith & D.C. Wasshausen, Phytologia, 52:445. 1983. Philippines. Sine figura.

robinsonii Merrill, 1912, non Ridley, 1909.

peruibensis Handro, Revta Brasil. Bot., 2:136, pl.1, 1979. Brazil. Fig. 19.11.

peruviana A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:133, 1859. Peru. Fig. 20.14.

petalodes Lindley, Edward's Bot. Reg., 21, pl. 1757, 1836; Nat. Syst. Bot., ed. 2:440, 1836 [= *Eupetalum petalodes* Lindley, 1836].—L.B. Smith & B.G. Schubert, Publ. Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.

= geraniifolia W.J. Hooker, 1835.

petasitifolia Brade, Bradea, 1:37, pl.1, 1971. Brazil. Fig. 7.10.

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= prismatocarpa J.D. Hooker, 1862.

petrophila Gilg, Bot. Jahrb. Syst., 34:86, 1904.—Engler, Veg. Erde, 9(3.2):614, 1921.

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petropolitana Glaziou, Bull. Soc. Bot. France, 56(Mem. 3d):324, 1909, nomen nudum.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983.

= egregia N.E. Brown, 1887.

philippinensis A. de Candolle, Prodr., 15(1):320, 1864.—Merrill, Philipp. J. Sci., 6:384, 1912.

= cumingii A. Gray, 1854.

philodendroides Ziesenhenne var. philodendroides, Begonian, 21:300, pl., 1954, "*philodendrodes.*" Mexico. Fig. 4.31.

philodendroides Ziesenhenne var. multiloba. Ziesenhenne, Begonian, 38:55, pl., 1971. Mexico.

phoeniogramma Ridley, J. Roy. Asiat. Soc. Straits Branch, 75:35, 1917. Malaya. Fig. 28.54

paupercula Ridley, 1910, non King, 1902.

phrixophylla Blatter & McCann, J. Ind. Bot. Soc., 10:27, pl., 1931. India. Fig. 11.6.

phyllomaniaca Martius, Index. Sem. herb. Monac., 1852.—Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854 [= *Knesebeckia phyllomaniaca* Klotzsch, 1854].—A. de Candolle in Martius, Fl. Bras., 4(1):385, pls. 99, 100, 1861. Mexico. Fig. 29.4. Sphalma; gelata in clave.

Walpers, Ann. Bot. Syst., 4:890, 1858.—Irmscher in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 21:554, 1925, taxon hybridogenum.

= × phyllomaniaca

physalifolia Liebmann, Vid. Medd. Naturh. For.

Kjöbenhavn 1852, p. 19, 1853.—A. de Candolle, Prodr., 15(1):362, 1864 [= *scandens* Swartz, 1788].—O.E. Schulz in Urban, Symb. Antil., 7:5, 1911.

= glabra Aublet var. glabra, 1775.

physandra Merrill & Perry, J. Arnold. Arbor., 24:41, pl. 1a–c, 1943. New Guinea. Fig. 8.46.

pickelii Irmscher, Bot. Jahrb. Syst., 74:621, 1949. Brazil. Fig. 20.42.

picta J.E. Smith, Exot. Bot., 2:81, pl. 101, 1805.—W.J. Hooker, Bot. Mag., vol. 57, pl. 2962, 1830.—Wallich, Num. List, 129, no. 3685B, pro parte A, 1831. India. Fig. 12.3, icon.

hirta Wallich ex W.J. Hooker, 1825.
erosa Wallich, 1831, pro parte.
echinata Royle, 1839.

picta sensu Wallich, Num. List, 129, no. 3685A, 1831, pro parte, non J.E. Smith, 1805.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:639, 1879.—J. Golding, Phytologia, 40:17, 1978.

= josephii A. de Candolle var. josephii, 1859.

picta hort. ex Henderson, Ill. Bouquet, 1, sub., pl. 11, 1857–1859, non J.E. Smith, 1805.—Regel, Gartenflora, 8:15, 1859 [= *Platycentrum annulatum* K. Koch, 1837].—A. de Candolle, Prodr., 15(1):350, 1864 [= *griffithii* W.J. Hooker, 1857].—Irmscher, Bot. Jahrb. Syst., 78:191, 1959.

= annulata K. Koch, 1837.

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pilderifolia C. de Candolle in Huber, Bull. Herb. Boissier, II, 1:315, 1901. Brazil. Fig. 17.17.

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Diploclinium pilosum Miquel, 1856.

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nigrovenia Regel, 1867.
tuerckheimii C. de Candolle, 1895.
dayi hort., 1947.
hidalgensis L.B. Smith & B.G. Schubert, 1950.

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plebeja Liebmann var. plebeja, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 8, 1853. Mexico and Central America. Fig. 22.11.

Gireoudia plebeja Klotzsch, 1854.

glandulosa sensu J.D. Smith, 1895, non W.J. Hooker, 1861, non A. de Candolle, 1864.

leptophylla C. de Candolle, 1908.

ripicola C. de Candolle, 1908.

tenuipila C. de Candolle, 1908.

fissurarum C. de Candolle, 1919.

uvana C. de Candolle, 1919.

barsalouxiae Standley & Williams, 1950.

plebeja var. *kennedyi* Ziesenhenne, 1959.

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pusilla A. de Candolle, 1859. Fig. 8.33.

warburgiana Hieronymus, 1895.

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Begonia roseo flore, foliis acutioribus auritis et late crenatis Plumier in Tournefort, 1700.

obliqua var. *epsilon* Linnaeus, 1753.

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= gracilipetiolata de Wildeman, 1908, pro parte.

= kisuluana Buttner, 1890, pro parte.

= fusialata Warburg, 1895, pro parte.

= alepensis A. Chevalier, 1912, pro parte.

= horticola Irmscher, 1921, pro parte.

pohliana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 153, 1855; Begoniac., 33, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):346, 1861 [= *macroptera* var. *pohliana* A. de Candolle, 1861].—L.B. Smith & B.G. Schubert. J. Wash. Acad. Sci., 40:245, 1950 [= *patula* Haworth, 1819].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

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Rachia polygonata Klotzsch ex A. de Candolle, 1864.

fonsecae Standley, 1952.

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Wageneria brasiliensis Klotzsch, 1855.

polygonoides J.D. Hooker in Oliver, Fl. Trop. Afr., 2:571, 1871. Guinea to Congo. Fig. 14.25

epilobioides Warburg, 1895.

rubronervata De Wildeman, 1908.

rhipsaloides A. Chevalier, 1912.

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populifolia sensu Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 16, 1853, non Humboldt, Bonpland, & Kunth, 1825, non Schott, 1827.—A. de Candolle, Prodr., 15(1):303, 1864 [= *tovarensis* Klotzsch, 1855].—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 40:245, 1950 [= *patula* Haworth, 1819]; Ann. Missouri Bot. Gard., 45:57, 1958 [= *fischeri* var. *tovarensis* Irmscher, 1953].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

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bellii Leveille, 1914.

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potamophila Gilg, Bot. Jahrb. Syst., 34:89, 1904. Tropical Africa. Fig. 2.21.

quadrialata sensu De Wildeman & T. Durand, 1900, pro parte, non Warburg, 1894.

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homblei De Wildeman, 1915.
subacuto-alata De Wildeman, 1915.
wellmanii Gilg ex Engler, 1921.
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= princeps A. de Candolle var. princeps, 1861.
princeps A. de Candolle var. princeps in Martius, Fl. Bras., 4(1):357, 1861. Brazil. Fig. S24.
princeps hort. Berol. ex Kotzsch, 1854.
Pritzelia princeps Klotzsch, 1855.
libonica hort. Berol. ex Klotzsch, 1855.
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kraussiantha Irmscher, 1959.
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petraea A. Chevalier, 1912.
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prolixa Craib, Bull. Misc. Inform., 413, 1930. Siam. Fig. 23.31.
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prostrata Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:516, 1939. China. Fig. 23.2
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Gireoudia pruinata Klotzsch, 1855.
pruinosa hort., 1881.
bakeri C. de Candolle, 1908.
pruinosa hort., Garden., 19:226, 1881; Hortus Third, 151, 1976.
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pseudisoptera Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:112, 1929. Malaya. Fig. 21.28.

isoptera Ridley, 1922, pro parte, non Dryander, 1789.

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pseudolateralis Warburg in Perkins, Fragm. Fl. Philipp., 51, 1904. Philippines. Fig. 28.15.

Mezierea salaziensis var. *calleryana* A. de Candolle, 1864.

aptera var. *calleryana* Fernandez-Villar, 1880.

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lateralis Elmer ex Merrill, 1923.

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similis Brade, 1944.

cylindricaulis Brade, 1954.

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pyrifolia Kunth ex Otto, Hamburger Garten-Blumenzeitung, 8:9, 1852, nomen nudum.
pyrrha Ridley, J. Straits Branch Roy. Asiat. Soc., 46:260, 1906. Borneo. Sine figura.

quadrialata Warburg var. quadrialata in Engler & Prantl, Nat. Pflanzenfam., 3(6A):140, pls. 47A, 48J, 1894; Bot. Jahrb. Syst., 22:43, 1895. Congo north to Sierra Leone and Guinea. Fig. 2.19.
whytei Stapf, 1905.
calabarica Stapf, 1906.
modica Stapf, 1908.
mildbraedii Gilg ex Mildbraed, 1913.
poikilantha Gilg ex Engler, 1921.
quadrialata var. *speciosa* Irmscher, 1961.
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= quadrialata Warburg var. quadrialata, 1894.
quadrialata sensu De Wildeman & T. Durand, Ann. Mus. Congo, II, 1:25, 1900.—Wilczek, Fl. Congo, Rwanda, Burundi, 33, 1969, non Warburg, 1894.
= potamophila Gilg, 1904, pro parte.
quadrilocularis Brade, Rodriguesia, 18:21, pl. 6, 1945.—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:114, 1955.
= egregia N.E. Brown, 1887.
quaternata L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 40:244, pl. 1p–s, 1950. Panama. Fig. 22.22
quercifolia A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:129, 1859. Philippines. Fig. 6.2.
leytensis Elmer, 1910.
quetamensis L.B. Smith & B.G. Schubert, Caldasia, 4:8, pl. 1, 1946.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984. Fig. 23.19.
= novogranatae A. de Candolle, 1864.
quintasii C. de Candolle, Bol. Soc. Brot., 10:122, 1892.—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:220, 1954.
= annobonensis A. de Candolle, 1859.

rabilii Craib, Bull. Misc. Inform., 415, 1930. Siam. Fig. 2.31.
racemiflora Ortigies ex C. Chevalier, Begonias, 151, 1938. Mexico. Descriptione inchoata.
racemosa Jack, Malay. Misc., 2(7):14, 1822. Sumatra. Sine figura.
Petermannia racemosa Klotzsch, 1854.
Diploclinium racemosum Miquel, 1856.
radiata Graham, Edinburgh New Philos. J., 182, 1833.—Link & Otto, Allg. Gartenzeitung, 44:348, 1836.
= heracleifolia Schlechtendal & Chamisso var. heracleifolia, 1830.
radicans Vellozo, Fl. Flum., vol. 10, pl. 39, "1827," 1831, icon; Arch. Mus. Nat. Rio de Janeiro, 5:404, 1881, descr. Brazil. Fig. 9.14.
dubia Vellozo, 1831, non Haworth, 1819.
procumbens Vellozo, 1831.
sandersii hort. Kew ex A. de Candolle, 1864.
limmingheana Morren, 1866.
coccinea var. *A. de Liming* Regel, 1868.
coccinea var. *Comte Alfred de Limering*

Regel, 1868.

limminghei Pynaert, 1875.

limminghi hort., 1885.

glaucophylla J.D. Hooker, 1892.

glaucophylla var. *scandens* hort. ex Fotsch, 1933.

glaucophylla var. *splendens* hort. ex Fotsch, 1933.

fritz-muelleri Brade, 1944.

ragozinii Schwacke, Pl. Nov. Mineiras, 2:4, pl. 3, 1900.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983.

= grisea A. de Candolle, 1859.

raimondii Irmscher, Bot. Jahrb. Syst., 74:629, 1949. Peru. Fig. 17.2

rajah Ridley, Gard. Chron., 2:213, pl. 31, 1894.—Rolfe, Bull. Misc. Inform., 327, 1914. Malaya. Sine figura.

ramentacea Paxton, Paxton's Mag. Bot., 12:73, 1846. Brazil. 24.27.

Pritzelia ramentacea Klotzsch, 1854.

oregana hort. ex Klotzsch, 1854.

ramicola Gilg ex De Wildeman, Ann. Mus. Congo, V, 2:322, 1908, nomen nudum.

ramosii Merrill, Philipp. J. Sci., 6:388, "1911," 1912. Philippines. Fig. 27.12

randaiensis Sasaki, List Pl. Form., 301, 1928.—Fide M.J. Lai in schedula, L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= palmata D. Don var. palmata, 1825.

randiana Merrill & Perry, J. Arnold Arbor., 24:47, pl. 3c,d, 1943. New Guinea. Fig. 18.35.

raulinii Brade, Arq. Jard. Bot. Rio de Janeiro, 8:232, pl. 5, 1948.—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):74, 1971.

= hilariana A. de Candolle, 1859.

raynaliorum Wilczek, Bull. Jard. Bot. Nat. Belg., 39:93, 1969. Cameroon. Sine figura.

razafinjohanyi Aymonin & Bosser, Fl. Madagascar, 144:84, pl. 3: figs. 4, 5, 1983. Madagascar. Editus sero pro clave.

reitzii Brade, Sellowia, 9:31, pl. 3, 1958.—L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):109, 1971.

= hispida Schott var. hispida, 1827.

relicta L.B. Smith & B.G. Schubert. Contr. Gray Herb., 154:31, pl. 2, 1945. Mexico. Fig. 28.43.

renifolia Irmscher. Bot. Jahrb. Syst., 50:379, 1913. Indonesia: Celebes. Fig. 29.7.

reniformis Dryander, Trans. Linn. Soc., 1:161, pl. 14: figs. 1, 2, 1791. Brazil. Fig. 4.17, icon (Fig. 29.5, icon, Fig. 31.17).

vitifolia Schott in Sprengel, 1827.

longipes W.J. Hooker, 1830. Fig. 29.5, icon.

truncata Vellozo, 1831.

reniformis sensu W.J. Hooker, 1833.

grandis Otto, 1836.

elatior hort. ex Steudel, 1841.

Wageneria reniformis Klotzsch, 1854.

Wageneria vitifolia Klotzsch, 1854.

Wageneria longipes Klotzsch, 1855.

vitifolia hort. ex Klotzsch, 1855.

longipes var. *laticordata* A. de Candolle, 1861.

vitifolia var. *bahiensis* A. de Candolle, 1861.

vitifolia var. *grandis* A. de Candolle, 1861.

huberi C. de Candolle, 1901.

palmifolia hort. ex Buxton, 1932.

inermis Irmscher, 1953. Fig. 31.17.

reniformis sensu W.J. Hooker, Bot. Mag., vol. 60, pl. 3225, 1833.—Link & Otto, Allg. Gartenzeitung, 4:349, 1836 [= *vitifolia* Schott, 1827].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:446, 1983.

= reniformis Dryander, 1791.

reniformis Vellozo, Fl. Flum., vol. 10, pl. 40, "1827," 1831, icon; Arch. Mus. Nat. Rio de Janeiro, 404, 1881, desc., non Dryander, 1791.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983.

= fabulosa L.B. Smith & D.C. Wasshausen, 1983.

reniformis hort. Berol. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854, non Dryander, 1791; pro syn. *Augustia dregei* Klotzsch, 1854.—A. de Candolle, Prodr., 15(1):384, 1864.

= dregei Otto & Dietrich, 1836.

reniformis Beddome, Madras J. Lit., 22:72, 1861, non Dryander, 1791; Madras J. Lit. Sci., III, 1:48, 1864.
= anaimalaiensis Beddome, 1864.

reniformis Pavon ex A. de Candolle, Prodr., 15(1):308, 1864, non Dryander, 1791; pro syn. *balmisiana* Balmis, 1794.—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:30, 1945 [= *monoptera* Link & Otto, 1828].—C. Karegeannes, Begonian, 50:9, 1983.
= balmisiana Balmis var. balmisiana, 1794.

repanda Blume, Enum. Pl. Javae, 1:97, 1827.—Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 192, 1855; Begoniac., 72, 1855 [= *Diploclinium repandum* Klotzsch, 1855].—A. de Candolle, Prodr. 15(1): 321, 1864.
= isoptera Dryander ex J.E. Smith, 1790.

repens Lamarck var. repens, Encyc., 1:394, 1785.—Urban, Arkiv. Bot., 23A(5):95, 1930. J. Golding, Phytologia, 39:124, 1978. West Indies: Haiti. Fig. 23.11.
Begonia roseo flore, folio aurito, minor & hirsuta Plumier in Tournefort, 1700.
obliqua var. *gamma* Linnaeus, 1753.

repens var. *beta* Lamarck, Encyc. 1:394, "1783," 1785, excl. Plumier, Pl. Amer., 2:34, pl. 45: fig. 3, 1756.—O.E. Schulz in Urban, Symb. Antil., 7:15, 1911.
= brachypoda Schulz, 1911.

repens Noronha, Verh. Batav. Gen., 5(art. 4):8, 1790, nomen nudum. Java.

repens Blume, Enum. Pl. Javae, 1:95, 1827, non Lamarck, 1785.—A. de Candolle, Prod., 15(1):391, 1864.—Koorders, Exkurs.-Fl. Java, 649, 1912.—J. Golding, Phytologia, 39:124, 1978.
= mollis A. de Candolle, 1864.

repens Vellozo, Fl. Flum., vol. 10, pl. 35, 1831, icon, non Lamarck, 1785; Arch. Mus. Nac., 5:403, 1881 descr.—Walpers, Repert. Bot. Syst., 2:216, 1843.—J. Golding, Phytologia, 39:125, 1978.
= velloziana Walpers, 1843.

repens herb. Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, non Lamarck, 1785; pro syn. *Rossmannia repens* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):333, 1864.
= rossmaniae A. de Candolle, 1864.

repens Schott ex A. de Candolle, Prodr., 15(1):365, 1864, non Lamarck, 1785; pro syn. convolvulacea A. de Candolle, 1861.

repens Liebmann ex Hemsley, Biol. Centr. Am. Bot., 1:497, 1880, non Lamarck, 1785.—J. Golding, Phytologia, 39:125, 1978, sphalmate pro *reptans* Liebmann, 1853; pro syn. *liebmannii* A. de Candolle, 1864.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:174, 1961.
= ludicra A. de Candolle, 1859.

repens Sessé & Mociño, Fl. Mexic., ed. 2:219, 1894, non Lamarck, 1785.—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:27, 1945.
= glabra Aublet var. glabra, 1775.

repenticaulis Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:547, pl. 16, 1939. China. Fig. 25.24.

reptans Bentham, Pl. Hartw., 61, 1840. Mexico. Fig. S12.

reptans Liebmann, Vid. Medd. Naturh. For. Kjoebenhavn 1852, p. 5, 1853, non Bentham, 1840.—A. de Candolle, Prodr., 15(1):345, 1864 [= *liebmannii* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Fieldiana, 24:174, 1961.
= ludicra A. de Candolle, 1859.

resecta Miquel ex Koorders, Exkurs.-Fl. Java, 2:645, 1912, pro syn. lepida Blume, 1827.

reticulata Gardner, Lond. J. Bot., 4:134, 1845. L.B. Smith & R.C. Smith, Fl. Il. Catarin., 1(Bego):32, 1971.
= angulata Vellozo var. angulata, 1831.

retusa O.E. Schulz in Urban, Symb. Antil., 7:20, 1911. Northern Lesser Antilles: St. Barth. Fig. 32.15.
nitida Grisebach, 1857, non Dryander, 1789.
domingensis sensu Boldingh, 1909.

rex Putzeys, Fl. Serres Jard. Eur., 2:141, pls.

1255, 1258, 1857.—W.J. Hooker, Bot. Mag., vol. 85, pl. 5701, 1859. India: Himalaya. Fig. 23.17.

rheifolia Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:132, pl. 6, 1929. Malaya. Fig. 8.15.

herveyana var. *robusta* Ridley, 1921.

rhipsaloides A. Chevalier, Bull. Soc. Bot. France, 58(Mem. 8d):174, "1911," 1912.—Hutchinson, Dalziel & Keay, Fl. W. Trop. Afr., ed. 2, 1:220, 1954.

= polygonoides J.D. Hooker, 1871.

rhizocarpa Fischer ex A. de Candolle in Martius, Fl. Bras., 4(1):382, 1861.—Wawra, Bot. Ergeb. Maxim. Brasil, 53, pl. 49, 1866.

= depauperata Schott, 1827.

rhizocarpa Fischer ex Otto & Dietrich, Allg. Gartenzeitung, 11:34, 1843, nomen nudum.—A. de Candolle, Prodr., 15(1):388, 1864 [= *rhizocarpa* Fischer ex A. de Candolle, 1861].—Wawra, Bot. Ergeb. Maxim. Brasil, 53, pl. 49, 1866.

= depauperata Schott, 1827.

rhizocaulis (Klotzsch) A. de Candolle, Prodr., 15(1):340, 1864. Mexico. Fig. 22.35.

Gireoudia rhizocaulis Klotzsch, 1856.

rhodantha Ridley, Trans. Linn. Soc. London, Bot., II, 9:58, 1916. New Guinea. Fig. 18.34.

rhodochlamys L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:25, pl. 1, 1945. Mexico. Fig. 12.20.

rhoephila Ridley, J. Roy. Asiat. Soc. Straits Branch, 75:36, 1917. Malaya. Fig. 13.13.

rhombicarpa A. de Candolle var. *rhombicarpa*, Ann. Sci. Nat. Bot., IV, 11:129, 1859.—Merrill, Philipp. J. Sci., 6:394, 1911.

= nigritarum Steudel, 1821.

rhombicarpa var. *lobbii* A. de Candolle, Prodr., 15(1):323, 1864.—Merrill, Philipp. J. Sci., 6:395, 1911.

= nigritarum Steudel, 1821.

rhopalocarpa Warburg, Bot. Jahrb. Syst., 22:40, 1895.—De Wilde & Arends, Acta. Bot. Neerl., 28:367, pl. 1, 1979. Tropical Africa. Fig. 16.24

injoloensis De Wildeman, 1908.

richardsiana T. Moore, Gard. Chron., 1065, pl. 243, 1871.—Irmscher, Bot. Jahrb. Syst., 81:141, 1961. [= *suffruticosa* Meisner, 1840].—Hilliard in Ross, Fl. South Afr., 22:142, 1976.

= dregei Otto & Dietrich var. dregei, 1836.

richardsoniana Houllet, Rev. Hortic., 44:333, pl. 35, 1872.—Irmscher, Bot. Jahrb. Syst., 81:141, 1961 [= *suffruticosa* Meisner, 1840].—Hilliard in Ross, Fl. South. Afr., 22:142, 1976.

= dregei Otto & Dietrich var. dregei, 1836.

richardsoniana Merrill & Perry, J. Arnold Arbor., 24:48, pl. 3.e,f, 1943, non Houllet, 1872.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= mystacina L.B. Smith & D.C. Wasshausen, 1984.

rieckei Warburg, Bot. Jahrb. Syst., 13:387, 1891; Fl. Schutzch Südsee, 457, 1901, "*rickei.*" New Guinea. Fig. 22.12.

riedelii A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:137, 1859; in Martius, Fl. Bras., 4(1):358, pl. 94, 1861. Brazil. Fig. 30.30, non typus.

riedelii A. de Candolle var. *latifolia* Brade, Rodriguesia, 18:26, 1945, nomen in eadem schedula cum cariocana.—L.B. Smith & D.C. Wasshausen. Phytologia, 52:442, 1983.

= cariocana Brade, 1845.

rigida Linden ex Regel, Gartenfl., 3:217, 1854. Brazil. Fig. 29.36.

tomentosa hort. Kew ex A. de Candolle, 1861, non Schott, 1827.

rigida hort. Turicensis ex Klotzsch, 1855.

Gurltia rigida Klotzsch, 1855.

rigida hort. Turicensis ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 177, 1855; Begoniac., 57, 1855, pro syn. *Gurltia rigida* Klotzsch, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.

= rigida Regel, 1854.

rigida sensu A. Clark, Begonian, 14:150, pl.,

1947.—F. Carrell, Begonian, 17:128, 1950.

= ludwigii Irmscher, 1937.

rimarum Craib, Bull. Misc. Inform., 415, 1930. Siam. Fig. 34.6.

riparia Irmscher, Bot. Jahrb. Syst., 81:126, 1961. East Africa: Tanganyika. Fig. 28.55.

ripicola C. de Candolle, Bull. Herb. Boissier, II, 8:314, 1908. Costa Rica. Sine figura. Gelata in clave.

Fide K. Burt-Utley, Tulane Studies Zool. Bot., 25(1), 1985.

= plebeja Liebmann var. plebeja, 1853.

rizalensis Merrill, Philipp. J. Sci., 6:388, "1911," 1912. Philippines. Fig. 21.46.

robinsonii Ridley, J. Fed. Malay States Mus., 4:22, 1909. Malaya. Fig. S27.

robinsonii Merrill, Philipp. J. Sci., 6:375, "1911," 1912, non Ridley, 1909.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:445, 1983.

= perryae L.B. Smith & D.C. Wasshausen, 1983.

robusta Blume var. robusta, Enum. Pl. Javae, 1:96, 1827. Java. Fig. 32.1.

Platycentrum robustum Miquel, 1856.

splendida hort. Rollisson ex Henderson, 1857.

Sphenanthera robusta Hasskarl ex Klotzsch, 1857.

Sphenanthera robusta var. *viridis* Hasskarl, 1858.

Casparya robusta A. de Candolle, 1864.

robusta Blume var. glabriuscula (A. de Candolle) J. Doorenbos, Sp. List, 45, 1971, ined.—J. Doorenbos ex F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:108, 1974. Java.

Casparya robusta var. *glabriuscula* A. de Candolle, 1864.

robusta Blume var. hirsutior (Miquel) J. Golding & C. Karegeannes, Phytologia, 54:499, 1984. Sumatra.

Diploclinium areolatum Miquel, 1858, quoad pl. Sumatra, non Miquel, 1856.

Platycentrum robustum var. *hirsutior* Miquel, 1861.

robusta Blume var. *rubra* (A. de Candolle) Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:471, 1984.

= muricata Blume, 1823.

robusta Zollinger ex Klotzsch, Bot. Zeitung, 15:182, 1857, pro syn. *Sphenanthera multangula* Klotzsch, 1857; non Blume, 1827.—A. de Candolle, Prodr., 15(1): 275, 1864 [= *Casparya multangula* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.

= multangula Blume var. multangula, 1827.

robustior Standley & Williams, Ceiba, 1:155, 1950.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= manicata Brongniart var. manicata, 1842.

rockii Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:544, 1939. Burma. Fig. 31.12.

roezlii Regel var. roezlii, Gartenflora, 25:194, pl. 871, 1876, "*roezli*." Peru. Fig. 33.5.

roezlii Regel var. rosea Regel, Gartenflora, 34:21, 1885, "*roezli*."

roezlii Lynch, Gard. Chron., n.s., 11:566, 1879; Garden, 24:162, pl. 402, 1883, non Regel, 1876.—J.D. Hooker, Bot. Mag., vol. 110, pl. 6758, 1884 [= *lynchiana* J.D. Hooker, 1884].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= cyathophora Poeppig & Endlicher, 1835.

romeenis De Wildeman, Ann. Mus. Congo, V, 2:321, pl. 78: fig. 2, 1908.—Wilczek, Fl. Congo, Rwanda, Burundi, 43, 1969.

= macrocarpa Warburg, 1895.

roraimensis Tutin, J. Bot. 78:251, 1940.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:470, 1984.

= fischeri Schrank var. fischeri, 1820.

rosacea Putzeys, Fl. Serres Jard. Eur., II, 2:25, pl. 1194, 1857. Colombia. Fig. 8.34.

rosacea Linden, Cat., 15, 1860, nomen nudum, non Putzeys, 1857.—A. de Candolle,

Prodr., 15(1):330, 517, 1864.

= novogranatae A. de Candolle, 1864.

rosacea sensu L.B. Smith, Phytologia, 27:212, 1973, pro parte, non Putzeys, 1857.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:444, 1983 [= *quetamensis* L.B. Smith & B.G. Schubert, 1946].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:469, 1984.

= novogranatae A. de Candolle, 1864.

rosea A. de Candolle, Prodr., 15(1):299, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:78, 1946.

= semiovata Liebmann, 1853.

roseibractea Ziesenhenne, Begonian, 50:19, pl., 1983. Mexico: Oaxaca. Editus sero pro clave.

rosiflora J.D. Hooker, Bot. Mag., vol. 93, pl. 5680, 1867.—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:201, 1941, "*rosaeflora*."

= veitchii J.D. Hooker, 1867.

rossmanniae A. de Candolle, Prodr., 15(1):333, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:103, pl. 12, 1946. Colombia, Ecuador, Peru. Fig. 16.33.

Rossmannia repens Klotzsch, 1854.

repens herb Ruiz ex Klotzsch, 1855.

rostrata Welwitsch ex J.D. Hooker var. rostrata in Oliver, Fl. Trop. Afr., 2:578, 1871.—Fernandes, Bol. Soc. Brot., II, 44:11, pls. 7, 8, 1970. West Africa. Fig. 27.14.

chevalieri Warburg ex A. Chevalier, 1912.

elliotti Gilg ex Engler, 1921.

rostrata Welwitsch var. argutiserrata Fernandes, Bol. Soc. Brot., II, 44:11, pl. 9, 1970. Angola.

rostrata sensu Exell, 1929.

rostrata Welwitsch var. brachyptera Fernandes, Bol. Soc. Brot., II, 44:10, pls. 5, 6, 1970. Angola.

chevalieri sensu Exell, 1929, non Warburg ex Chevalier, 1912.

rostrata sensu Exell, J. Bot., 67, suppl., 1:198, 1929.—Fernandes, Bol. Soc. Brot., II, 44:11, pl. 9, 1970.

= rostrata var. argutiserrata Fernandes, 1970.

rotata Liebmann, Vid. Medd. Naturh. For. Kjöbenhavn 1852, p. 11, 1853.—A. de Candolle, Prodr., 15(1):335, 1864.

= carolineifolia Regel, 1852.

rotunda Vellozo, Fl. Flum., vol. 10, pl. 38, "1827," 1831, icon, nomen nudum; Arch. Mus. Nat. Rio de Janeiro, 5:404, 1881, descr. Brazil. Fig. 22.10.

rotundifolia Lamarck, Encyc., 1:394, 1785.—J. Golding, Phytologia, 45:247, 1980. West Indies. Fig. 7.16.

Begonia flore roseo, folio orbiculari Plumier in Tournefort, 1700.

obliqua var. *delta* Linnaeus, 1753.

rotundifolia Grisebach, Fl. Brit. W.I., 304, 1860, non Lamarck, 1785.—O.E. Schulz in Urban, Symb. Antil., 7:22, 1911 [= *macrophylla* Lamarck, 1785].—J. Golding, Phytologia, 45:246, 1980.

= obliqua Linnaeus var. obliqua, 1753.

rotundifolia Grisebach, Cat. Pl. Cub., 117, 1866, non Lamarck, 1785.—O.E. Schulz in Urban, Symb. Antil., 7:18, 1911.

= wrightiana A. de Candolle, 1859.

roxburghii A. de Candolle, Prodr., 15(1):398, 1864. India, Burma. Fig. 34.14.

malabarica Roxburgh, 1832, non Lamarck, 1785.

Diploclinium roxburghii Miquel, 1856.

Casparya oligocarpa A. de Candolle, 1864.

Casparya polycarpa A. de Candolle, 1864.

roxburghii sensu Ridley, J. Fed. Malay States Mus., 4:20, 1909; Fl. Malay Penins., 5:854, 1925.

= tricornis Ridley, 1917.

roylei K. Koch, Berliner Allg. Gartenzeitung, 10:75, 1857, non visus.—Fide J. Doorenbos in litteris [= *laciniata* Roxburgh, 1832].—H. Hara, F.E. Himalaya, 215, 1966.

= palmata D. Don var. palmata, 1825.

rubella F. Hamilton ex D. Don, Prodr. Fl. Nepal, 223, 1825.—Wallich, Num. List, 129, no.

3687, 1831.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:642, 1879.—J. Golding, Phytologia, 40:17, 1978.—Hara, Enum. Fl. Pl. Nepal, 2:182, 1979. Nepal. Fig. 2.23.

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humilis var. *glabrata* Seemann, 1854.

flexuosa A. de Candolle, 1859.

guyanensis A. de Candolle, 1859.

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Hoffmannella rosea Klotzsch ex A. de Candolle, 1864.

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sericoneura sensu Seemann, 1854.
Gireoudia fibrillosa Klotzsch, 1855.
Gireoudia pilifera Klotzsch, 1855.
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lanuginosa A. de Candolle, 1859.
pilifera A. de Candolle, 1864.
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Mitscherlichia stictopoda Miquel, 1858.

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Gireoudia stigmosa Klotzsch, 1854.
mexiae Standley, 1929.

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disticha Link, 1822.

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strictipetiolaris Irmscher, Bot. Jahrb. Syst., 50:348, 1913. Indonesia: Celebes. Fig. 28.13.

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  Gireoudia strigillosa Klotzsch, 1854.
  daedalea Lemaire, 1861.
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suaveolens sensu Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 146, 1855; Begoniac., 26, 1855, non Loddiges, 1817.—A. de Candolle, Prodr., 15(1):293, 1864 [= *nitida* Dryander in Aiton, 1789].—O.E. Schulz in Urban, Symb. Antil., 7:10, 1911.
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  Obs.: e plantis cultis vidi fortasse species propria. J.G.

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Diploclinium sublobatum Miquel, 1856.
subnummularifolia Merrill, Philipp. J. Sci., 29:403, 1926. Borneo. Fig. 9.3.
suborbiculata Merrill, Philipp. J. Sci., 6:398, "1911," 1912. Philippines. Fig. 26.23.
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subpeltata Wight, Icones, 5:9, pl. 1812, 1852. India. Fig. 23.20.
Reichenheimia subpeltata Klotzsch, 1855.
subpeltata hort. ex Regel, Gartenflora, 15:358, 1866, non Wight, 1852.—Irmscher, Pareys Blumengärtnerei, ed. 2:89, 1960.
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Donaldia ulmifolia Klotzsch, 1854.

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Isopteryx umbellata Klotzsch, 1855.

Casparya umbellata A. de Candolle, 1864.

fissisepala C. de Candolle, 1908.

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Trilomisa undulata Rafinesque, 1836.

Gaerdtia undulata Klotzsch, 1854.

Gaerdtia stenobotrys Klotzsch, 1855.

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squarrosa sensu Seeman, 1853, non Liebmann, 1853.

Gireoudia setosa Klotzsch, 1855.

Gireoudia urophylla Klotzsch, 1855.

setifera A. de Candolle, 1864.

squamosa C. de Candolle, 1908.

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urticifolia J.E. Smith, 1790. Fig. 18.7.

columnaris Bentham, 1844.

trachyptera Bentham, 1845.

coccinea Ruiz ex Klotzsch, 1854, pro parte.

glabra Ruiz ex Klotzsch, 1854.

Sassea columnaris Klotzsch, 1854.

Sassea glabra Ruiz ex Klotzsch, 1854.

Stridotheca trachyptera Klotzsch, 1854.

cucullata Ruiz ex Klotzsch, 1855.

Casparya coccinea Klotzsch, 1855.

Sassea urticae Klotzsch, 1855.

Stibadotheca trachyptera Klotzsch, 1855.

columnaris Pavon ex A. de Candolle, 1864.

Casparya columnaris A. de Candolle, 1864.

Casparya columnaris var. *glabra* A. de Candolle, 1864.

Casparya trachyptera A. de Candolle, 1864.

Casparya urticae A. de Candolle, 1864.

Casparya urticae var. *hispida* A. de Candolle, 1864.

Sassea hoffmanniana Klotzsch ex A. de Candolle, 1864.

Stibadotheca urticae Klotzsch ex A. de Candolle, 1864.

monticola C. de Candolle, 1908.

torresii Standley, 1927.

urticae var. *hispida* A. de Candolle ex Standley, 1927.

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vaginans Vellozo, Fl. Flum., vol. 10, pl. 37, "1827," 1831, icon; Arch. Mus. Nat. Rio de Janeiro 5: 403, 1881, desc.—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.

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vareschii Irmscher, Bot. Jahrb. Syst., 78:185, 1959. Venezuela. Fig. 21.1.

variabilis Ridley, J. Roy. Asiat. Soc. Straits Branch, 57:50, 1911.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 8:147, pl. 10, 1929. Malaya. Fig. 27.4.

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varistyla Irmscher, Bot. Jahrb. Syst., 76:80, 1953. Bolivia. Fig. 17.6.

veitchii J.D. Hooker, Gard. Chron., 734, 1867; Bot. Mag., vol. 93, pl. 5663, 1867. Peru. Fig. 7.17, icon.
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vellerea Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 152, 1855; Begoniac., 32, 1855.—L.B. Smith & R.C. Smith, Fl. Il. Catarin, 1(Bego):49, 1971 [= *patula* Haworth, 1819].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:471, 1984.
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repens Vellozo, 1831.

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velutina hort. Vindob ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 174, 1855; Begoniac., 54, 1855, pro syn. *Ewaldia lobata* Klotzsch, 1855; non hort. Berol. ex Klotzsch, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):375, 1861.
= lobata Schott, 1827.

velutina hort. Berol. ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 160, 1855; Begoniac., 40, 1855, pro syn. *Knesebeckia balmisiana* Klotzsch, 1855; non hort. Vindob ex Klotzsch, 1855.—C. Karegeannes, Begonian, 50:12. 1983.
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= lobata Schott, 1827.

verruculosa L.B. Smith, Phytologia, 27:218, pl. 8, 1973. Venezuela. Fig. 31.5.

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= digitata Raddi var. digitata, 1820.

verticillata W.J. Hooker, Icon. Pl., vol. 9, pl. 811, 1851, non Vellozo, 1831.—A. de Candolle, Prodr., 15(1):353, 1864.—J. Golding & C. Karegeannes, Phytologia, 54:499, 1984.

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villifera hort. Galeotti, J. Hort. Prat. Belgique, 11:3, 1853. Descriptione inchoata.

villifolia Irmscher, Notes Roy. Bot. Gard. Edinburgh, 21:43, 1951. China. Fig. 5.34.

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villosa Lindley, Bot. Reg., vol. 15, pl. 1252, 1829.—Otto & Dietrich, Allg. Gartenzeitung, 4:359, 1836.

= hirtella Link var. hirtella, 1822.

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vincentina O.E. Schulz var. vincentina in Urban, Symb. Antil., 7:14, 1911. West Indies: St. Vincent. Fig. 26.20.

vincentina O.E. Schulz var. scopulicola O.E. Schulz in Urban, Symb., Antil., 7:15, 1911. West Indies: St. Vincent.

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vitifolia hort. Berol. ex Klotzsch, Abh. Königl. Akad. Wiss Berlin 1854, p. 238, 1855;

Begoniac., 118, 1855, pro syn. *Wageneria longipes* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):365, 1864 [= *longipes* W.J. Hooker, 1830].—Irmscher, Webbia, 12:506, 1957.

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vitifolia Lindley, Edward's Bot. Reg., 28, Misc., 21, 1842, non Schott, 1827.—Walpers, Repert. Bot. Syst., 2:209, 1843.

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wadei Merrill & Quisumbing, Addisonia, 17:57, pl. 573, 1932. Philippines. Fig. 12.19.

wagenerana W.J. Hooker, Bot. Mag., vol. 83, pl. 4988, 1857, non W.J. Hooker, Bot. Mag., vol. 84, pl. 5047, 1858, "*wageneriana*".—A. de Candolle, Prodr., 15(1):289, 1864. Brazil or Venezuela. Fig. S4, icon.

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= odorata Willdenow, 1813.

wageneria A. de Candolle, Prodr., 15(1):366, 1864, sphalmate pro wagenerana W.J. Hooker, 1858.

wakefieldii Gilg ex Engler f. wakefieldii, Veg. Erde, 9(3.2):620, 1921.—Irmscher, Bot. Jahrb. Syst., 81:127, 1961. East Africa. Fig. 12.12.

wakefieldii Gilg ex Engler f. dentatiloba Irmscher, Bot. Jahrb. Syst., 81:128, 1961. Tanganyika.

wallichiana Steudel, Nom., ed. 2, 1:194, 1840, nomen nudum.—J. Doorenbos, Begonian, 42:213, 1975 [= *parviflora* F. Hamilton ex Wallich, 1831].—H. Hara, J. Jap. Bot., 47:112, 1972.

= minicarpa H. Hara, 1972.

wallichiana Lehman in E. Otto, Neue Allg. Deutsche Garten-Blumenzeitung, 6:455, 1850, non Steudel, 1840.—J. Doorenbos, Begonian, 42:213, 1975. Mexico. (Fig. 28.22.)

parviflora Liebmann, 1847, non Poeppig & Endlicher, 1835.

franconis Liebmann, 1853. Fig. 28.22, non typus.

modesta Liebmann, 1853.

Doratometra wallichiana Klotzsch, 1854.

Diploclinium wallichianum Miquel, 1856.

walpersii Heynhold, Nom. Bot., 2:63, 1846.—L.B. Smith & B.G. Schubert, Caldasia, 4:184, 1946.

= guaduensis Humboldt, Bonpland & Kunth var. guaduensis, 1825.

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warburgii Schumann & Lauterbach, Fl. Deutsch. Schutzgeb. Südsee, 459, 1901. New Guinea. Fig. 6.6.

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Cyathocnemis

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= Begonia cyathophora Poeppig & Endlicher, 1835.

Diploclinium

angustifolium (Blume) Miquel, Fl. Ned. Ind., 1.1:687, 1856.—A. de Candolle, Prodr., 15(1):397, 1864 [= *Begonia angustifolia* Blume, 1827].—Koorders, Exkurs.-Fl. Java, 2:651, 1912.

= Begonia isoptera Dryander ex J.E. Smith, 1790.

apterum (Blume) Miquel, Fl. Ned. Ind., 1.1:691, 1856.—A. de Candolle, Prodr., 15(1): 397, 1864.

= Begonia aptera Blume var. aptera, 1827.

areolatum Miquel, Fl. Ned. Ind., 1.1:689, 1856.—A. de Candolle, Prodr., 15(1): 397, 1864.

= Begonia areolata Miquel, 1857.

areolatum Miquel, Fl. Ned. Ind., 1.1:1091, 1858, quoad pl. Sumatra, non Miquel, 1856; Fl. Ned. Ind., Eerste bijv, 332, 1861 [= *Platycentrum robustum* var. *hirsutior* Miquel, 1861].—J. Golding & C. Karegeannes, Phytologia, 54:499, 1984.

= Begonia robusta var. hirsutior J. Golding & C. Karegeannes, 1984.

arnottianum Wight, Ic. Pl. Ind. Or., 1:9, 3, pl. 1815, 1852.—A. de Candolle, Prodr., 15(1):322, 1864.

= Begonia arnottiana A. de Candolle, 1864.

atrichum Miquel, Fl. Ned. Ind., 1.1:1091, 1858.—A. de Candolle, Prodr., 15(1): 321, 1864.

= Begonia atricha A. de Candolle, 1864.

biloculare Wight, Ic. Pl. Ind. Or., 1:9; 3, pl. 1814, 1852.—A. de Candolle, Prodr., 15(1): 354, 1864.

= Begonia sinuata Wallich ex Meisner var. sinuata, 1836.

bombycinum (Blume) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 192, 1855; Begoniac., 72, 1855.—Miquel, Fl. Ind. Bot., 1.1:687, 1856.—A. de Candolle, Prodr., 15(1):321, 1864.

= Begonia isoptera Dryander ex J.E. Smith, 1790.

bracteatum (Jack) Miquel, Fl. Ned. Ind., 1.1:688, 1856.—A. de Candolle, Prodr., 15(1): 316, 1864.

= Begonia bracteata Jack var. bracteata, 1822, pro parte, quoad pl. Jack.

= Begonia bracteata var. gedeana A. de Candolle, 1864, pro parte, quoad pl. Java.

caespitosum Miquel, Fl. Ned. Ind., 1.1:685, 1856.—A. de Candolle, Prodr., 15(1): 397, 1864.

= Begonia caespitosa Jack, 1822.

carnosum Teijsmann & Binnendijk, Tijdschr. Ned.-Indië, 25:420, 1863, non visus.

= Begonia carnosa Teijsmann & Binnendijk, 1863.

cordifolium Wight, Ic. Pl. Ind. Or., 1:9; 3, pl. 1816, 1852.—Thwaites, Enum. Pl. Zeyl., 129, 1859.

= Begonia cordifolia Thwaites var. cordifolia, 1859.

cumingianum (Klotzsch) Miquel, Fl. Ned. Ind., 1.1:691, 1856.—A. de Candolle, Prodr., 15(1):320, 1864.

= Begonia cumingiana A. de Candolle, 1864.

evansianum Lindley, Veg. Kingd., 318, pl. 220, 1846.—A. de Candolle, Prodr., 15(1): 313, 1864 [= *Begonia evansiana* Andrews, 1811].—Irmscher, Mitt. Allg. Bot. Hamburg, 10:492, 1939.

= Begonia grandis subsp. evansiana Irmscher, 1939.

fasciculatum (Jack) Miquel, Fl. Ned. Ind., 1.1: 690, 1856.—A. de Candolle, Prodr., 15(1):322, 1864.

= Begonia fasciculata Jack, 1822.

hasskarlianum Miquel, Fl. Ned. Ind., 1.1:1091, 1858.—A. de Candolle, Prodr., 15(1): 329, 1864.
= Begonia hasskarliana A. de Candolle, 1864.

holosericeum Teijsmann & Binnendijk, Tijdschr. Ned.-Indië, 25:421, 1863, non visus.
= Begonia holosericea Teijsmann & Binnendijk, 1863.

horsfieldii Miquel, Fl. Ned. Ind., 1.1:691, 1856.—A. de Candolle, Prodr., 15(1): 397, 1864.
= Begonia horsfieldii Miquel ex A. de Candolle, 1864.

lepidotum Miquel, Fl. Ned. Ind., 1.1:1104, 1858, sphalmate pro ***lepidum*** Miquel, 1856.

lepidum (Blume) Miquel, Fl. Ned. Ind., 1.1:689, 1856.—A. de Candolle, Prodr., 15(1): 317, 1864 [=***Begonia lepida*** Blume, 1827].—Koorders, Exkurs.-Fl. Java, 2:645, 1912.
= Begonia bracteata Jack, 1822.

lindleyanaum Wight, Ic. Pl. Ind. Or., 1:9; 3, pl. 1817, 1852.—A. de Candolle, Prodr., 15(1):329, 1864.
= Begonia fallax A. de Candolle, 1864.

longifolium (Blume) Miquel, Fl. Ned. Ind., 1.1:687, 1856.—A. de Candolle, Prodr., 15(1):398, 1864.
= Begonia longifolia Blume, 1823.

longifolium Miquel var. ***luxurians*** Miquel ex Koorders, Exkurs.-Fl. Java, 2:650, 1912, pro syn. Begonia longifolia Blume, 1823.

orbiculatum (Jack) Miquel, Fl. Ned. Ind., 1.1:686, 1856.—A de Candolle, Prodr., 15(1):398, 1864.
= Begonia orbiculata Jack, 1822.

pilosum (Jack) Miquel, Fl. Ned. Ind., 1.1:688, 1856.—A. de Candolle, Prodr., 15(1): 398, 1864.
= Begonia pilosa Jack, 1822.

racemosum (Jack) Miquel, Fl. Ned. Ind., 1.1:691, 1856.—A. de Candolle, Prodr., 15(1): 322, 1864.
= Begonia racemosa Jack, 1822.

repandum (Blume) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 192, 1855; Begoniac., 72, 1855.—A. de Candolle, Prodr., 15(1):321, 1864.
= Begonia isoptera Dryander ex J.E. Smith, 1790.

repens (Blume) Miquel, Fl. Ned. Ind., 1.1:686, 1856; Fl. Ned Ind., Eerste bijv.:333, 1861 [= ***Mitscherlichia repens*** Miquel, 1861].—A. de Candolle, Prodr., 15(1):391, 1864.
= Begonia mollis A. de Candolle, 1864.

roxburghii Miquel, Fl. Ned. Ind., 1.1:692, 1856.—A. de Candolle, Prodr., 15(1): 399, 1864.
= Begonia roxburghii A. de Candolle, 1864.

rubrum (Blume) Miquel, Fl. Ned. Ind., 1.1:689, 1856.—Hasskarl, Neu Schuss. Rumph., 146, 1866.—Merrill, Interp. Herb. Amboin., 379, 1917.
= Begonia muricata Blume, 1823.

saxatile (Blume) Miquel, Fl. Ned. Ind., 1.1:686, 1856.—A. de Candolle, Prodr., 15(1): 351, 1864 [= ***Begonia saxatilis*** Blume, 1827].—Backer & Van den Brink, Fl. Java, 1:309, 1964.
= Begonia muricata Blume, 1823.

sublobatum (Jack) Miquel, Fl. Ned. Ind., 1.1:690, 1856.—A. de Candolle, Prodr., 15(1): 355, 1864.
= Begonia sublobata Jack, 1822.

timorense Miquel, Fl. Ned. Ind., 1.1:692, 1856.—A. de Candolle, Prodr., 15(1):407, 1864 [= ***Mezierea salaziensis*** Gaudichaud, 1841].—J. Golding & C. Karegeannes, Phytologia, 54:494, 1984.
= Begonia timorensis J. Golding & C. Karegeannes, 1984.

tuberosum Miquel, Fl. Ned. Ind., 1.1:685, 1856.—A. de Candolle, Prodr., 15(1): 323, 1864 [= ***Begonia tuberosa*** Lamarck, 1785].—Merrill, Interp. Herb. Amboin., 379, 1917.—L.B. Smith & D.C. Wasshausen, Phytologia, 52:446, 1983.
= Begonia muricata Blume, 1823.

wallichianum Miquel, Fl. Ned. Ind., 1.1:690, 1856.—A. de Candolle, Prodr., 15(1): 383, 1864.—J. Doorenbos, Begonian, 42:214, 1975.
= Begonia wallichiana Lehmann, 1850, non Steudel, 1840.

Donaldia

ottonis (Walpers) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 199, 1855; Begoniac., 79, 1855.—A. de Candolle, Prodr., 15(1): 292, 1864 [= *Begonia ottonis* Walpers, 1843].—L.B. Smith & B.G. Schubert, Caldasia, 4:184, 1946.
= Begonia guaduensis Humboldt, Bonpland & Kunth var. guaduensis, 1825.

ulmifolia (Willdenow) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Gartenflora, 3:215, pl. 93, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 198, pl. 7B, 1855; Begoniac., 78, pl. 7B, 1855.—A. de Candolle, Prodr., 15(1): 290, 1864.
= Begonia ulmifolia Willdenow, 1805.

Doratometra

bowringiana Seemann, Bot. Voy. Herald, 379, 1857.—A. de Candolle, Prodr., 15(1): 348, 1864 [= *Begonia laciniata* var. *bowringiana* A. de Candolle, 1864].—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:533, 1939 [= *Begonia laciniata* subsp. *bowringiana* Irmscher, 1939].—J. Golding & C. Karegeannes, Phytologia, 54:494, 1984.
= palmata var. bowringiana J. Golding & C. Karegeannes, 1984.

wallichiana (Steudel) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 184, pl. 5B, 1855; Begoniac., 64, pl. 5B, 1855.—A. de Candolle, Prodr., 15(1): 383, 1864.—J. Doorenbos, Begonian, 42:214, 1975.
= Begonia wallichiana Lehmann, 1850, non Steudel, 1840.

Eupetalum

gaudichaudii Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 121, 1854, nomen nudum. Peru.

geraniifolium (W.J. Hooker) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 121, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 141, 1855; Begoniac., 21, (1855).—A. de Candolle, Prodr., 15(1):281, 1864.
= Begonia geraniifolia W.J. Hooker, 1835.

kunthianum Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 121, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 141, pl. 1B, 1855; Begoniac., 21, pl. 1B, 1855.—A. de Candolle, Prodr., 15(1):281, 1864) [= *Begonia gaudichaudii* Walpers, 1846].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.
= Begonia geraniifolia W.J. Hooker, 1835.

lindleyanum Gaudichaud, Bot. Voy. Bonite, pl. 50, 1837.—Walpers, Repert. Bot. Syst., 5:769, 1846 [= *Begonia gaudichaudii* Walpers, 1846]; Ann. Bot. Syst., 4:875, 1858 [= *Eupetalum petalodes* Lindley, 1836].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.
= Begonia geraniifolia W.J. Hooker, 1835.

lindleyanum herb. Kunth ex Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 141, 1855; Begoniac. 21, 1855, pro syn. *Eupetalum kunthianum* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):281, 1864 [= *Begonia gaudichaudii* Walpers, 1846].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.
= Begonia geraniifolia W.J. Hooker, 1835.

petalodes Lindley, Nat. Syst. Bot., 440, 1836.—L.B. Smith & B.G. Schubert, Pub. Field Mus. Nat. Hist., Bot. Ser., 13:189, 1941.
= Begonia geraniifolia W.J. Hooker, 1835.

tuberosum herb. Ruiz ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 121, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 142, 1855; Begoniac., 22, 1855.—A. de Candolle, Prodr., 15(1):281, 1864.
= Begonia geraniifolia W.J. Hooker, 1835.

Ewaldia

ferruginea Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 173, 1855; Begoniac., 53, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):375, 1861.
= Begonia lobata Schott, 1827.

lobata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 174, pl. 3C, 1855; Begoniac., 54, pl. 3C, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):375, 1861.
= Begonia lobata Schott, 1827.

Gaerdtia

argentea (Van Houtte) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 170, 1855; Begoniac., 50, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):354, 1861.
= Begonia maculata var. argentea A. de Candolle, 1861.

kunthiana (Walpers) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 171, 1855; Begoniac., 51, 1855.—A. de Candolle, Prodr., 15(1):319, 1864.
= Begonia kunthiana Walpers, 1852.

maculata (Raddi) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 169, pl. 3A, 1855; Begoniac., 49, pl. 3A, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):354, 1861.
= Begonia maculata Raddi var. maculata, 1820.

stenobotrys Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 171, 1855; Begoniac., 51, 1855 [= *Gaerdtia undulata* Klotzsch, 1855].—A. de Candolle in Martius, Fl. Bras., 4(1):355, 1861.
= Begonia undulata Schott, 1827.

undulata (Schott) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 170, 1855; Begoniac., 50, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):355, 1861.
= Begonia undulata Schott, 1827.

Gireoudia

asarifolia (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854. A. de Candolle, Prodr., 15(1):344, 1864.
= Begonia hydrocotylifolia var. asarifolia A. de Candolle, 1864.

barkeri (Knowles & Wescott) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 216, 1855; Begoniac., 96, 1855.—A. de Candolle, Prodr., 15(1): 394, 1864.
= Begonia barkeri Knowles & Wescott, 1840.

cardiocarpa (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854: Abh. Königl. Akad. Wiss. Berlin 1854, p. 209, 1855; Begoniac., 89, 1855.—A. de Candolle, Prodr., 15(1): 337, 1864.

= Begonia cardiocarpa Liebmann, 1852.

carolineifolia (Regel) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, "*caroliniaefolia*"; Abh. Königl. Akad. Wiss. Berlin 1854: p. 211, 1855; Begoniac., 91, 1855.—A. de Candolle, Prodr., 15(1):335, 1864.

= Begonia carolineifolia Regel, 1852.

carpinifolia (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854.

= Begonia carpinifolia Liebmann var. carpinifolia, 1853.

conchifolia (Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125. 1854, "*conchaefolia*"; Abh. Königl. Akad. Wiss. Berlin 1854, p. 217, 1855; Begoniac., 97, 1855.—A. de Candolle, Prodr., 15(1): 337, 1864.

= Begonia conchifolia Dietrich var. conchifolia, 1851.

conchifolia Klotzsch var. *scutellata* (Liebmann) Klotzsch, Abh. Königl. Preuss. Akad. Wiss. Berlin 1854, p. 217, 1855, "*conchaefolia* var. *scutellata*"; Begoniac., 97, 1855.—A. de Candolle, Prodr., 15(1): 338, 1864.

= Begonia conchifolia Dietrich var. conchifolia, 1851.

conchifolia var. *warscewicziana* Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 217, 1855, "*conchaefolia* var. *warscewiziana*"; Begoniac., 97, 1855.—A. de Candolle, Prodr., 15(1):337, 1864.

= Begonia conchifolia Dietrich var. conchifolia, 1851.

crassicaulis (Lindley) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 207, 1855; Begoniac., 87, 1855.—A. de Candolle, Prodr., 15(1):335, 1864.

= Begonia crassicaulis Lindley, 1842.

fibrillosa Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 206, 1855; Begoniac., 86, 1855.—A. de Candolle, Prodr., 15(1): 337, 1864 [= ***Begonia pilifera*** A. de Candolle, 1864].—Burt-Utley, Phytologia, 54:487, 1984.

= Begonia sericoneura Liebmann, 1853.

fimbriata (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 210, 1855; Begoniac., 90, 1855.—A. de Candolle, Prodr., 15(1):346, 1864.

= Begonia fimbriata Liebmann, 1853.

heracleifolia (Schlechtendal & Chamisso) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 214, 1855; Begoniac., 94, 1855.—A. de Candolle, Prodr., 15(1):335, 1864.

= Begonia heracleifolia Schlechtendal & Chamisso var. heracleifolia, 1830.

heracleifolia Klotzsch var. *punctata* Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 215, 1855; Begoniac., 95, 1855.—A. de Candolle, Prodr., 15(1):335, 1864.

= Begonia heracleifolia var. punctata A. de Candolle, 1864.

heracleifolia Klotzsch var. *viridis* Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 215, 1855; Begoniac., 95, 1855.—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:170, 1961.

= Begonia heracleifolia Schlechtendal & Chamisso var. heracleifolia, 1830.

hydrocotylifolia Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 218, 1855; Begoniac., 98, 1855.—A. de Candolle, Prodr., 15(1):344, 1864.

= Begonia hydrocotylifolia Otto ex W.J. Hooker var. hydrocotylifolia, 1842.

involucrata (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125

1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 204, 1855; Begoniac., 84, 1855.—A. de Candolle, Prodr., 15(1): 339, 1864.
= Begonia involucrata Liebmann var. involucrata, 1853.

laciniata Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 205, 1855; Begoniac., 85, 1855.—A. de Candolle, Prodr., 15(1): 340, 1864 [= *Begonia laciniosa* A. de Candolle, 1864].—Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 18:743, 1937.
= Begonia involucrata Liebmann var. involucrata, 1853.

lindleyana (Walpers) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 207, 1855; Begoniac., 87, 1855 [= *vitifolia* Klotzsch, 1855].—A. de Candolle, Prodr., 15(1):336, 1864.
= Begonia lindleyana Walpers, 1843.

lobulata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 208, pl. 7C, 1855; Begoniac., 88, pl. 7C, 1855.—A. de Candolle, Prodr., 15(1):339, 1864 [= *Begonia lobulata* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:181, 1961 [= *Begonia sartorii* Liebmann, 1853].—A. de Candolle, Prodr., 15(1):337, 1864.
= Begonia sarcophylla Liebmann, 1853.

macrophylla Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 216, 1855; Begoniac., 96, 1855, *synonymis Dryander excluso Klotzsch sphalma.*—A. de Candolle, Prodr., 15(1):341, 1864 [= *Begonia peponifolia* Visiani ex A. de Candolle, 1864].—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.
= Begonia barkeri Knowles & Wescott, 1840.

macrophylla Klotzsch var. *concolor* Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 216, 1855; Begoniac., 96, 1855.—Fide J. Doorenbos in litteris, J. Golding & C. Karegeannes, Phytologia, 54:496, 1984.
= Begonia barkeri Knowles & Wescott, 1840.

macrophylla Klotzsch var. *discolor* Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 216, 1855; Begoniac., 96, 1855.—A. de Candolle, Prodr., 15(1):341, 1864 [= *Begonia peponifolia* ex A. de Candolle, 1864].—J. Golding & C. Karegeannes, Phytologia, 54:498, 1984.
= Begonia barkeri Knowles & Wescott, 1840.

manicata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 214, 1855; Begoniac., 94, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):388, 1861.
= Begonia manicata Brongniart var. manicata, 1842.

multinervia (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854.—J. Golding, Phytologia, 40:457, 1978.
= Begonia multinervia Liebmann, 1853.

nelumbiifolia (Schlechtendal & Chamisso) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 218, 1855; Begoniac., 98, 1855.—A. de Candolle, Prodr., 15(1):343, 1864.
= Begonia nelumbiifolia Schlechtendal & Chamisso, 1830.

ottoniana Regel, Gartenflora, 8:15, 1859.—A. de Candolle, Prodr., 15(1):399, 1864.
= Begonia × *ottoniana* A. de Candolle, 1864, taxon hydridogenum.

pilifera Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 206, 1855; Begoniac., 86, 1855.—A. de Candolle, Prodr., 15(1): 337, 1864 [= *Begonia pilifera* A. de Candolle, 1864].—K. Burt-Utley, Phytologia, 54:488, 1984.

= Begonia sericoneura Liebmann, 1853.

plebeja (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 217, 1855; Begoniac., 97, 1855.—A. de Candolle, Prodr., 15(1):338, 1864.

= Begonia plebeja Liebmann var. plebeja, 1853.

pruinata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 207, 1855; Begoniac., 87, 1855.—A. de Candolle, Prodr., 15(1): 338, 1864.

= Begonia pruinata A. de Candolle, 1864.

punctata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854.—A. de Candolle, Prodr., 15(1):335, 1864.

= Begonia heracleifolia var. punctata A. de Candolle, 1864.

rhizocaulis Klotzsch, Ann. Sci. Nat. Bot., IV, 6:351, 1856.—A. de Candolle, Prodr., 15(1):341, 1864.

= Begonia rhizocaulis A. de Candolle, 1864.

rotata (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 211, 1855; Begoniac., 91, 1855.—A. de Candolle, Prodr., 15(1): 335, 1864.

= Begonia carolineifolia Regel, 1852.

sarcophylla (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 208, 1855; Begoniac., 88, 1855, "*sarchophylla*".—A. de Candolle, Prodr., 15(1):337, 1864 [= Begonia sarcophylla Liebmann, 1853].—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:173, 1961 [= *Begonia lindleyana* Walpers, 1843].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:472, 1984.

= Begonia sarcophylla Liebmann, 1853.

schizolepis (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 214, 1855; Begoniac., 94, 1855 [= *manicata* Klotzsch, 1855]; A. de Candolle in Martius, Fl. Bras., 4(1):388, 1861.

= Begonia manicata Brongniart var. manicata, 1842.

sericoneura (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 209, 1855; Begoniac., 89, 1855.—A. de Candolle, Prodr., 15(1):336, 1864 [= Begonia sericoneura Liebmann, 1853].—L.B. Smith & B.G. Schubert, Caldasia, 4:11, pl. 2, 1946 [= *Begonia lindleyana* sensu L.B. Smith & B.G. Schubert, 1946; non Walpers, 1843].—K. Burt-Utley, Phytologia, 54:488, 1984.

= Begonia sericoneura Liebmann, 1853.

setosa Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 212, 1855; Begoniac., 92, 1855.—A. de Candolle, Prodr., 15(1): 338, 1864 [= *Begonia setifera* A. de Candolle, 1864].—K. Burt-Utley, Tulane Studies Zool. Bot., 25(1), 1985.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:472, 1984.

= Begonia urophylla W.J. Hooker, 1855.

setulosa (Bertoloni) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 211, 1855; Begoniac., 91, 1855.—A. de Candolle, Prodr., 15(1):396, 1864.

= Begonia setulosa Bertoloni, 1840.

squarrosa (Liebmann) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin 1854, p. 210, 1855; Begoniac., 90, 1855.—A. de Candolle, Prodr., 15(1):343, 1864.

= Begonia squarrosa Liebmann, 1853.

stigmosa (Lindley) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, Abh. Königl. Akad. Wiss. Berlin 1854, p. 213, 1855; Begoniac., 93, 1855.—A. de Candolle, Prodr., 15(1):343, 1864.

= Begonia stigmosa Lindley, 1845.

strigiliosa (Dietrich) Klotzsch, Monatsber. Kön-

igl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 213, 1855; Begoniac., 93, 1855.—A. de Candolle, Prodr., 15(1):342, 1864.
= Begonia strigillosa Dietrich, 1851.

urophylla (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 212, 1855; Begoniac., 92, 1855.—A. de Candolle, Prodr., 15(1):339, 1864.
= Begonia urophylla W.J. Hooker, 1855.

vitifolia (Lindley) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 207, 1855; Begoniac., 87, 1855.—A. de Candolle, Prodr., 15(1):336, 1864.
= Begonia lindleyana Walpers, 1843.

warscewicziana Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 217, 1855; Begoniac., 97, 1855, pro syn. *Gireoudia conchifolia* var. *warscewicziana* Klotzsch, 1855.—A. de Candolle, Prodr., 15(1):338, 1864.
= Begonia conchifolia Dietrich var. conchifolia, 1851.

Gurltia

boucheana Klotzsch, Ann. Sci. Nat. Bot., IV, 6:351, 1856.—A. de Candolle, Prodr., 15(1):373, 1864.
= Begonia boucheana A. de Candolle, 1864.

meyeri (Otto & Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 177, pl. 4B, 1855; Begoniac., 57, pl. 4B, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.
= Begonia tomentosa var. eriocaulis A. de Candolle, 1861.

rigida Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 177, 1855; Begoniac., 57, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.
= Begonia rigida Regel, 1854.

strigulosa Hasskarl, Hort. Bogor. Descr., 323, 1858.—A. de Candolle, Prodr., 15(1): 399, 1864.
= Begonia strigulosa A. de Candolle, 1864.

tomentosa (Schott) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 177, 1855; Begoniac., 57, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):376, 1861.
= Begonia tomentosa Schott var. tomentosa, 1827.

Haagea

dipetala (Graham) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl Akad. Wiss. Berlin 1854, p. 224, pl. 9C, 1855; Begoniac., 104, pl. 9C, 1855.—A. de Candolle, Prodr., 15(1): 391, 1864.
= Begonia dipetala Graham, 1828.

Hoffmannella

rosea Klotzsch ex A. de Candolle, Prodr., 15(1):299, 1864, pro syn. *Begonia rosea* A. de Candolle, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:78, 1946.
= Begonia semiovata Liebmann, 1853.

Huszia

octopetala (l'Héritier) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 121, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 138, pl. 1A, 1855; Begoniac., 18, pl. 1A, 1855.—A. de Candolle, Prodr., 15(1): 284, 1864.
= Begonia octopetala l'Héritier var. octopetala, 1788.

rubricaulis (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 139, 1855; Begoniac., 19, 1855.—A. de Candolle, Prodr., 15(1):283, 1864.
= Begonia rubricaulis W.J. Hooker var. rubricaulis, 1844.

Isopteris

longirostris (Bentham) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854.—A. de Candolle, Prodr., 15(1): 272, 403, 1864 [= *Casparya longirostris* A. de Candolle, 1864].—L.B. Smith & D.C. Wasshausen, Phytologia, 44:242, 1979.
= Begonia longirostris Bentham, 1845.

umbellata (Humboldt, Bonpland & Kunth) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 252, pl. 12B, 1855; Begoniac., p. 132, pl. 12B, 1855 [= *Isopteryx umbellata* Klotzsch, 1855].—A. de Candolle Prodr., 15(1): 270, 1864 [= *Casparya umbellata* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.
= Begonia umbellata Humboldt, Bonpland & Kunth, 1825.

Isopteryx

umbellata (Humboldt, Bonpland & Kunth) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854 p. 252, 1855; Begoniac., 132, 1855.—A. de Candolle, Prod., 15(1):270, 1864 [= *Casparya umbellata* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.
= Begonia umbellata Humboldt, Bonpland & Kunth, 1825.

Knesebeckia

aucubifolia hort. Berol. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854, "*aucubaefolia*"; Abh. Königl. Akad. Wiss. Berlin 1854, p. 162, 1855; Begoniac., 42, 1855.—A. de Candolle, Prodr., 15(1):309, 1864.
= Begonia incarnata Link & Otto var. incarnata, 1829.

acutiloba (Liebmann) Klotzsch ex Walpers, Ann. Bot. Syst., 4:889, 1858.
= Begonia acutiloba Liebmann, 1853.

balmisiana (Balmis) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 168, 1855; Begoniac., 48, 1855.—A. de Candolle, Prodr., 15(1):308, 1864.
= Begonia balmisiana Balmis var. balmisiana, 1794.

biserrata (Lindley) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 165, 1855; Begoniac., 45, 1855.—A. de Candolle, Prodr., 15(1):305, 1964.
= Begonia biserrata Lindley var. biserrata, 1847.

bracteata Hasskarl, Hort. Bogor. Descr., 316, 1858.—A. de Candolle, Prodr., 15(1): 317, 1864.
= Begonia lepida Blume, 1827.

bulbifera (Link) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 167, 1855; Begoniac., 47, 1855.—A. de Candolle, Prodr., 15(1):311, 1864.
= Begonia bulbillifera Link & Otto, 1831.

crenatiflora Klotzsch & Putzeys, Abh. Königl. Akad. Wiss. Berlin 1854, p. 165, 1855; Begoniac., 45, 1855.—A. de Candolle, Prodr., 15(1):306, 1864 [= *Begonia crenatiflora* A. de Candolle, 1864].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:466, 1984; Phytologia, 55:112, 1984.
= Begonia biserrata Lindley var. biserrata, 1847.

crenatiflora sensu L.B. Smith & D.C. Wasshausen, Phytologia, 54:472, 1984, non Klotzsch & Putzeys, 1855; Phytologia, 55:112, 1984.
= Begonia pedata Liebmann, 1853.

discolor (R. Brown) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 164, 1855; Begoniac., 44, 1855.—A. de Candolle, Prodr., 15(1):313, 1864 [= *Begonia evansiana* Andrews, 1811].—

Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939.

= Begonia grandis subsp. evansiana Irmscher, 1939.

falciloba (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 166, 1855; Begoniac., 46, 1855.—A. de Candolle, Prodr., 15(1):311, 1864.

= Begonia falciloba Liebmann, 1853.

ignea Klotzsch, Abh. Konigl. Akad. Wiss. Berlin 1854, p. 166, 1855; Begoniac., 46, 1855.—A. de Candolle, Prodr., 15(1):306, 1864.

= Begonia ignea Warszewicz ex A. de Candolle var. ignea, 1864.

incarnata (Link & Otto) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 163, 1855; Begoniac., 43, 1855.—A. de Candolle, Prodr., 15(1): 309, 1864.

= Begonia incarnata Link & Otto var. incarnata, 1829.

martiana (Link & Otto) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 167, pl. 2C, 1855; Begoniac., 47, pl. 2C, 1855.—A. de Candolle, Prodr., 15(1):310, 1864.

= Begonia gracilis var. martiana A. de Candolle, 1864.

monoptera (Link & Otto) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 168, 1855; Begoniac., 48, 1855.—A. de Candolle, Prodr., 15(1):308, 1864 [= *Begonia monoptera* Link & Otto, 1828].—C. Karegeannes, Begonian, 50:10, 1983.

= Begonia balmisiana Balmis var. balmisiana, 1794.

papillosa (Graham) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 163, 1855; Begoniac., 43, 1855.—A. de Candolle, Prodr., 15(1):309, 1864.

= Begonia incarnata var. papillosa A. de Candolle, 1864.

pedata (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 164, 1855; Begoniac., 44, 1855.—A. de Candolle, Prodr., 15(1):306, 1864.

= Begonia pedata Liebmann, 1853.

phyllomaniaca (Martius) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854.—Walpers, Ann. Bot. Syst., 4:890, 1858, taxon hybridogenum.

= Begonia × phyllomaniaca Martius, 1852.

Lauchea

verticillata (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 242, 1855; Begoniac., 122, 1855.—A. de Candolle, Prodr., 15(1):353, 1864.

= Begonia adenopoda Lemaire, 1857.

Lepsia

foliosa (Humboldt, Bonpland & Kunth) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 182, 1855; Begoniac., 62, 1855.—A. de Candolle, Prodr., 15(1):375, 1864.

= Begonia foliosa Humboldt, Bonpland & Kunth var. foliosa, 1825.

microphylla Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 182, pl. 5A, 1855; Begoniac., 62, pl. 5A, *Lepsia foliosa*, 1855.—A. de Candolle, Prodr., 15(1):375, 1864.

= Begonia microphylla A. de Candolle var. microphylla 1864.

poeppigiana Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 183, 1855; Begoniac., 63, 1855.—A. de Candolle, Prodr., 15(1): 376, 1864 [= *Begonia poeppigiana* A. de Candolle, 1864].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:472, 1984.

= foliosa var. australis L.B. Smith & B.G. Schubert, 1946.

Magnusia

fusca (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 222, pl. 9B, 1855; Begoniac., 102, pl. 9B, 1855.—A. de Candolle, Prodr., 15(1):334, 1864.
= Begonia fusca Liebmann, 1852.

maxima hort. ex Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 223, 1855; Begoniac., 103, 1855.—A. de Candolle, Prodr., 15(1):334, 1864 [= *Begonia maxima* hort. ex A. de Candolle, 1864].—L.B. Smith and B.G. Schubert, Fieldiana: Bot., 24:167, 1961.
= Begonia fusca Liebmann, 1852.

Mezierea

griffithiana A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:144, 1859.—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:644, 1879 [= *Begonia episcopalis* C.B. Clarke, 1879].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):142, 1894.
= Begonia griffithiana Warburg, 1894.

molleri C. de Candolle, Bol. Soc. Brot., 10:124, 1892.—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):141, 1894.
= Begonia molleri Warburg, 1894.

nepalensis A. de Candolle, Ann. Sci. Nat. Bot., IV, 11:144, 1859, nomen nudum; Prodr., 15(1):406, 1864.—C.B. Clarke in J.D. Hooker, Fl. Brit. India, 2:643, 1879, sphalmate pro *Begonia gigantea* Wallich ex C.B. Clarke, 1879.—Warburg in Engler & Prantl, Natur. Pflanzenfam, 3(6A):142, 1894.
= Begonia nepalensis Warburg var. nepalensis, 1894.

nepalensis A. de Candolle, var. *micropteron* A. de Candolle, Prodr., 15(1):407, 1864.—J. Doorenbos, Check List Begonia Sp., 35, 1971, ined.—J. Doorenbos ex F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:85, 1974.
= Begonia nepalensis var. micropteron J. Doorenbos ex F.A. Barkley & J. Golding, 1972.

salaziensis Gaudichaud, Voy. Bonite, Bot., pl. 32, 1841.—Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 187, 1855; Begoniac., 67, 1855, "*salaciensis*".—Warburg in Engler & Prantl, Nat. Pflanzenfam, 3(6A):139, 1894.
= Begonia salaziensis Warburg, 1894.

salaziensis var. *comorensis* A. de Candolle, Prodr., 15(1):408, 1864.—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):139, 1894.
= Begonia comorensis Warburg, 1894.

salaziensis var. *calleryana* A. de Candolle, Prodr., 15(1):408, 1864.—Fernandez-Villar in Blanco & Mercado, Fl. Filip. ed. 3, 4:99, 1880 [= *Begonia aptera* var. *calleryana* Fernandez-Villar, 1880].—Merrill, Philipp. J. Sci., 6:374, 1912.
= Begonia pseudolateralis Warburg, 1904.

Mitscherlichia

albo-coccinea (W.J. Hooker) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 193, pl. 6A, 1855; Begoniac., 73, pl. 6A, 1855.—A. de Candolle, Prodr., 15(1):389, 1864.
= Begonia albo-coccinea W.J. Hooker, 1845.

coriacea (Hasskarl) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 194, 1855; Begoniac., 74, 1855.—A. de Candolle, Prodr., 15(1):390, 1864 [= *Begonia peltata* sensu Hasskarl, 1843].—J. Golding, Phytologia, 47:293, 1981.
= Begonia coriacea Hasskarl, 1844.

grahamiana Hasskarl, Hort. Bog. Desc., 334, 1858.—A. de Candolle, Prodr., 15(1): 389, 1864.
= Begonia albo-coccinea W.J. Hooker, 1845.

junghuhniana Miquel, Fl. Ned. Ind., 1.1:696, 1856.—A. de Candolle, Prodr., 15(1): 390, 1864 [= *Begonia junghuhniana* Miquel, 1857].—Backer & Van den Brink, Fl. Java, 1:309, 1964.
= Begonia coriacea Hasskarl, 1844.

lobbii Hasskarl, Hort. Bogor. Descr., 351, 1858.—A. de Candolle, Prodr., 15(1): 390, 1864.
= Begonia lobbii A. de Candolle, 1864.

repens Miquel, Fl. Ned. Ind., Eerste bijv., 333, 1861.—A. de Candolle, Prodr., 15(1): 391, 1864.
= Begonia mollis A. de Candolle, 1864.

rubro-setulosa Hasskarl, Hort. Bogor. Descr., 336, 1858.—A. de Candolle, Prodr., 15(1):390, 1864.
= Begonia rubro-setulosa A. de Candolle, 1864.

stictopoda Miquel, Fl. Ned. Ind., 1.1:1092, 1858.—A. de Candolle, Prodr., 15(1): 391, 1864.
= Begonia stictopoda A. de Candolle, 1864.

trichopoda Miquel, Fl. Ned. Ind., Eerste bijv.:333, 1861.—A. de Candolle, Prodr., 15(1):386, 1864.
= Begonia trichopoda Miquel, 1858.

Monopteron

nepalensis sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:85, 1974, sphalmate pro *Mezieria nepalensis* A. de Candolle, 1859.

trisulcatum sensu F.A. Barkley & J. Golding, Sp. Begoniaceae, ed. 2:132, 1974, sphalmate pro *Casparya trisulcata* A. de Candolle, 1859.

Moschkowitzia

fagopyroides (Kunth) Klotzsch, Monatsber. Königl. Preuss. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin, 1854, p. 197, pl. 8A, 1855; Begoniac., 77, pl. 8A, 1855.—A. de Candolle, Prodr., 15(1): 289, 1864 [= *Begonia fagopyroides* Kunth & Bouché, 1845].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:443, 1983.
= Begonia denticulata Humboldt, Bonpland & Kunth, 1825.

wageneria A. de Candolle, Prodr., 15(1):366, 1864, sphalmate pro *wagenerana* Klotzsch, 1855.

wagenerana (Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 197, 1855; Begoniac. 77, 1855 "*wageneriana*".—A. de Candolle, Prodr., 15(1):289, 1864.
= Begonia wagenerana W.J. Hooker, Bot. Mag., vol. 83, pl. 4988, 1857, non W.J. Hooker, pl. 5047, 1858.

Nephromischus

rutilans (Van Houtte) Klotzsch, Ind. Sem. Hort. Berol., app., 1, 1855.—A. de Candolle, Prodr., 15(1):374, 1864.
= Begonia rutilans hort. Van Houtte ex A. de Candolle, 1864.

Petermannia

cumingiana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 195, pl. 6C, 1855; Begoniac., 75, pl. 6C, 1855.—Miquel, Fl. Ned. Ind., 1.1:691, 1856 [= *Diploclinium cumingianum* Miquel, 1856].—A. de Candolle, Prodr., 15(1):320, 1864.
= Begonia cumingiana A. de Candolle, 1864.

fasciculata (Jack) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 195, 1855; Begoniac., 75, 1855.—Miquel, Fl. Ned. Ind., 1.1:690, 1856 [= *Diploclinium fasciculata* Miquel, 1856].—A. de Candolle, Prodr., 15(1):322, 1864.
= Begonia fasciculata Jack, 1822.

geniculata (Jack) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 196, 1855; Begoniac., 76, 1855.—A. de Candolle, Prodr., 15(1):321, 1864.
= Begonia isoptera Dryander ex J.E. Smith, 1790.

racemosa (Jack) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 196, 1855; Begoniac., 76, 1855.—Miquel, Fl. Ned. Ind., 1.1:691, 1856 [= *Diploclinium racemosum* Miquel, 1856].—A. de Candolle, Prodr., 15(1):322, 1864.
= Begonia racemosa Jack, 1822.

Pilderia

erythrotricha Klotzsch in herb. Berol. ex A. de Candolle in Martius, Fl. Bras., 4(1):344, 1861, pro syn. Begonia humilis var. porterana A. de Candolle, 1861.

hirsuta Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854, nomen nudum.—A. de Candolle, Prodr., 15(1):381, 1864, pro syn. *Begonia pavoniana* A. de Candolle, 1859.—O.E. Schulz in Urban, Symb. Antil., 7:27, 1911.
= Begonia humilis Dryander var. humilis in Aiton, 1789.

urticifolia Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854, "*urticaefolia,*" nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 186, pl. 7A, 1855; Begoniac., 66, pl. 7A, 1855.—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):144, 1894 [= *Begonia urticifolia* Warburg, 1894].—L.B. Smith & B.G. Schubert, Caldasia, 4:100, 1946.
= Begonia buddleiifolia A. de Candolle, 1859.

Platycentrum

annulatum K. Koch, Berl. Garten., 2, 1837, non visus.—Regel, Gartenflora, 8:15, 1859.—A. de Candolle, Prodr., 15(1): 350, 1864 [= *Begonia griffithii* W.J. Hooker, 1857].—Irmscher, Bot. Jahrb. Syst., 78:191, 1959.
= Begonia annulata K. Koch, 1837.

cathcartii (J.D. Hooker & Thomson) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 245, 1855; Begoniac., 125, 1855.
= Begonia cathcartii J.D. Hooker & Thomson, 1855.

discolor (R. Brown) Miquel, Fl. Ned. Ind., 1.1:694, 1856.—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939.
= Begonia grandis subsp. evansiana Irmscher, 1939.

erosum (Blume) Miquel, Fl. Ned. Ind., 1.1:694, 1856.—Klotzsch, Bot. Zeitung., 15:182, 1857 [= *Sphenanthera erosa* Hasskarl ex Klotzsch, 1858].—A. de Candolle, Prodr., 15(1):276, 1864 [= *Casparya erosa* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia erosa Blume, 1827.

hamiltonianum Miquel, Fl. Ned. Ind., 1.1:695, 1856.—A. de Candolle, Prodr., 15(1): 295, 1864 [= *Begonia acuminata* Dryander, 1781].—O.E. Schulz in Urban, Symb. Antil., 7:13, 1911.
= Begonia acutifolia Jacquin, 1787.

multangulum (Blume) Miquel, Fl. Ned. Ind., 1.1:695, 1856.—Klotzsch, Bot. Zeitung.,

15:182, 1857 [= *Spenanthera multangula* Klotzsch, 1857].—A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya multangula* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia multangula Blume var. multangula, 1827.

multangulum var. ***glabrata*** Miquel, Fl. Ned. Ind., 1.1:695, 1856.—Klotzsch, Bot. Zeitung., 15:182, 1857 [= *Spenanthera multangula* Klotzsch, 1857].—A. de Candolle, Prodr., 15(1):276, 1864 [= *Casparya multangula* var. *glabrata* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia multangula var. glabrata Miquel, 1857.

robustum (Blume) Miquel, Fl. Ned. Ind., 1.1:694, 1856.—Klotzsch, Bot. Zeitung, 15:182, 1857 [= *Spenanthera robusta* Hasskarl ex Klotzsch, 1857].—A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya robusta* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia robusta Blume var. robusta, 1827.

robustum Miquel var. ***hirsutior*** Miquel, Fl. Ned. Ind., Eerste bijv., 332, 1861.—J. Golding & C. Karegeannes, Phytologia, 54:499, 1984.
= Begonia robusta var. hirsutior J. Golding & C. Karegeannes, 1984.

rubro-venium (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 244, pl. 11B, 1855; Begoniac., 124, pl. 11B, 1855.—A. de Candolle, Prodr., 15(1): 347, 1864 [= *Begonia rubro-venia* W.J. Hooker, 1853].—H. Hara, J. Jap. Bot., 47:143, 1972.
= Begonia hatacoa F. Hamilton ex D. Don, 1825.

rupicolum Miquel, Fl. Ned. Ind., 1.1:693, 1856.—A. de Candolle, Prodr., 15(1): 352, 1864.
= Begonia rupicola Miquel, 1857.

tenuifolium (Dryander) Miquel, Fl. Ned. Ind., 1.1:693, 1856.
= Begonia tenuifolia Dryander, 1791.

teysmannianum Miquel, Fl. Ned. Ind., 1.1:1092, 1858.—A. de Candolle, Prodr., 15(1): 276, 1864 [= *Casparya teysmanniana* Miquel ex A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia teysmanniana Warburg, 1894.

xanthinum (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 243, 1855; Begoniac., 123, 1855.—A. de Candolle, Prodr., 15(1):347, 1864.
= Begonia xanthina W.J. Hooker var. xanthina, 1852.

zollingeranum Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 245, 1855; Begoniac., 125, 1855, "*zollingerianum*".—A. de Candolle, Prodr., 15(1):351, 1864.
= Begonia zollingerana A. de Candolle, 1859.

Pritzelia

angulata Klotzsch ex Wawra, Bot. Ergeb. Maxim. Bras., 51, 1866, pro syn. Begonia angulata Vellozo var. angulata, 1831.

coccinea (W.J. Hooker) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1954, p. 228, 1855; Begoniac., 108, 1855.—A. de Candolle in Martius, Fl. Bras. 4(1):360, 1861.
= Begonia coccinea W.J. Hooker, 1843.

deflexa A. de Candolle, Prodr., 15(1):362, 1864, sphalmate pro *Wageneria deflexa* Klotzsch, 1855, pro syn. *Begonia scandens* Swartz,

1788.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

fischeri (Otto & Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 228, pl. 10B, 1855; Begoniac., 108, pl. 10B, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):360, 1861 [= *fischeri* Otto & Dietrich, 1836].—Irmscher, Bot. Jahrb. Syst., 76:60, 1953.
= Begonia dietrichiana Irmscher, 1953.

glabra A. de Candolle, Prodr., 15(1):362, 1864, sphalmate pro *Wageneria glabra* Klotzsch, 1855; pro syn. *Begonia scandens* Swartz, 1788.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

glauca Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 229, 1855; Begoniac., 109, 1855.—A. de Candolle, Prodr., 15(1): 330, 1864.
= Begonia glauca Ruiz & Pavon ex A. de Candolle, 1864.

lucida A. de Candolle, Prodr., 15(1):362, 1864, sphalmate pro *Wageneria lucida* Klotzsch, 1855; pro syn. *Begonia scandens* Swartz, 1788.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

montana A. de Candolle, Prodr., 15(1):362, 1864, sphalmate pro *Wageneria montana;* pro syn. *Begonia scandens* Swartz, 1788.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

princeps Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 231, 1855; Begoniac., 111, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):357, 1861.
= Begonia princeps A. de Candolle var. princeps, 1861.

ramentacea (Paxton) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 231, 1855; Begoniac., 111, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):356, 1861.
= Begonia ramentacea Paxton, 1846.

sanguinea (Raddi) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 229, 1855; Begoniac., 109, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):357, 1861.
= Begonia sanguinea Raddi, 1820.

zebrina Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 230, 1855; Begoniac., 110, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):360, 1861.
= Begonia angularis Raddi var. angularis, 1820.

Putzeysia

gemmipara (W.J. Hooker & Thomson) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 255, 1855; Begoniac., 135, 1855.—A. de Candolle, Prodr., 15(1):315, 1864.
= Begonia gemmipara J.D. Hooker & Thomson, 1855.

Rachia

incana (Lindley) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 189, 1855; Begoniac., 69, 1955.—A. de Candolle, Prodr., 15(1):326, 1864 [= *Begonia incana* var. *auriformis* A. de Candolle, 1864].—J. Golding, Phytologia, 47:292, 1981.

= Begonia peltata var. auriformis J. Golding, 1981.

meyeri (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 189, 1855; Begoniac., 69, 1855.—J. Doorenbos, Begonian, 41:168, 1974.
= Begonia sunorchis C. Chevalier, 1938.

peltata (Otto & Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 189, pl. 6B, 1855; Begoniac., 69, pl. 6B, 1855.—A. de Candolle, Prodr., 15(1):326, 1864 [= *Begonia incana* Lindley, 1841].—J. Golding, Phytologia, 47:292, 1981.
= Begonia peltata Otto & Dietrich var. Peltata, 1841.

polygonata Klotzsch ex A. de Candolle, Prodr., 15(1):327, 1864, pro syn. Begonia polygonata Liebmann var. polygonata, 1853.

Reichenheimia

stelzneri Klotzsch in Otto & Dietrich, Allg. Gartenzeitung, 24:205, 1856.—Warburg in Engler & Prantl, Nat. Pflanzenfam., 13(6A):141, 1894.
= Begonia stelzneri Warburg, 1894.

subpeltata (Wight) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 175, 1855; Begoniac., 55, 1855.—A. de Candolle, Prodr., 15(1):386, 1864.
= Begonia subpeltata Wight, 1852.

thwaitesii (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 175, pl. 4A, 1855; Begoniac., 55, pl. 4A, 1855.—A. de Candolle, Prodr., 15(1):386, 1864 [= *Begonia thwaitesii* W.J. Hooker, 1853].—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:652, 1879.
= Begonia tenera Dryander, 1791.

zeylanica Klotzsch in Otto & Dietrich, Allg. Gartenzeitung, 24:205, 1856.—Fide J. Doorenbos, Check List Begonia Sp., 59, 1971, ined. [= *Begonia thwaitesii* W.J. Hooker, 1853].—C.B. Clarke in J.D. Hooker, Fl. Brit. Ind., 2:652, 1879.
= Begonia tenera Dryander, 1791.

Riessia

ferruginea Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, pl. 5C, 1855; Begoniac., pl. 5C, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):379, 1861.
= Begonia hookerana Gardner, 1845.

pulchella (Raddi) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 124, 1854.
= Begonia pulchella Raddi, 1821.

Rossmannia

repens Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 125, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 219, pl. 9A, 1855; Begoniac., 99, pl. 9A, 1855.—A. de Candolle, Prodr., 15(1):333, 1864.
= Begonia rossmaniae A. de Candolle, 1864.

Sassea

columnaris (Bentham) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 128, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 254, 1855; Begoniac., 134, 1855.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya columnaris* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.
= Begonia urticae Linnaeus f. var. urticae, 1781.

glabra Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 128, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 254, pl. 12C, 1855; Begoniac., 134, pl. 12C, 1855.—A. de Candolle,

Prodr., 15(1):274, 1864 [= *Casparya columnaris* var. *glabra* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Field Mus. Nat. Hist., Bot. Ser., 13:187, 1941 [= *Begonia columnaris* var. *glabra* L.B. Smith & B.G. Schubert, 1941]; Caldasia, 4:34, 1946.
= Begonia urticae Linnaeus f. var. urticae, 1781.

hoffmanniana Klotzsch ex A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya urticae* var. *hispida* A. de Candolle, 1864].—Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 18:747, 1937 [= *Begonia torresii* Standley, 1927].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.
= Begonia urticae Linnaeus f. var. urticae, 1781.

urticae (Linnaeus f.) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 128, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 253, 1855; Begoniac., 133, 1855.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya urticae* var. *hispida* A. de Candolle, 1864].—Standley, Publ. Field Mus. Nat. Hist., Bot. Ser., 18:747, 1937 [= *Begonia torresii* Standley, 1927].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.
= Begonia urticae Linnaeus f. var. urticae, 1781.

Saueria

crenata Hasskarl, Verslagen Meded. Afd. Natuurk. Kon. Akad. Wetensch., 139, 1855, non visus.
= Begonia crenata Dryander, 1791.

sulcata (Scheidweiler) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 122, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 161, pl. 2A, 1855; Begoniac., 41, pl. 2A, 1855.—A. de Candolle, Prodr., 15(1): 288, 1864 [= *Begonia sulcata* Scheidweiler, 1848].—L.B. Smith, Phytologia, 27:218, 1973.
= Begonia dichotoma Jacquin, 1790.

Scheidweileria

digitata (Raddi) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 180, pl. 4C, 1855; Begoniac., 60, pl. 4C, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):374, 1861.
= Begonia digitata Raddi var. digitata, 1821.

ferrata Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum.

incisoserrata Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 181, 1855; Begoniac., 61, 1855.—A. de Candolle, Prodr., 15(1): 371, 1864.
= Begonia incisoserrata A. de Candolle, 1861.

luxurians (Scheidweiler) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 180, 1855; Begoniac., 60, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):374, 1861.
= Begonia luxurians Scheidweiler var. luxurians, 1848.

muricata (Scheidweiler) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 179, 1855; Begoniac., 59, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):373, 1861.
= Begonia pentaphylla Walpers, 1843.

parviflora (Poeppig & Endlicher) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 179, 1855; Begoniac., 59, 1855.—A. de Candolle, Prodr., 15(1):370, 1864.
= Begonia parviflora Poeppig & Endlicher, 1835.

repens Hasskarl, Hort. Bogor. Descr., 325, 1858.—A. de Candolle, Prodr., 15(1): 391, 1864.
= Begonia mollis A. de Candolle, 1864.

sellowiana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum.

Semibegoniella

jamesonia C. de Candolle, Bull. Herb. Boissier, II, 8:327, 1908.—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:112, 1955 [= *Begonia grewiifolia* Warburg, 1894].—L.B. Smith & D.C. Wasshausen, Phytologia, 44:242, 1979.
= Begonia longirostris Bentham, 1845.

sodiroi C. de Candolle, Bull. Herb. Boissier, II, 8:327, 1908.—L.B. Smith & B.G. Schubert, J. Wash. Acad. Sci., 45:112, 1955 [= *Begonia grewiifolia* Warburg, 1894].—L.B. Smith & D.C. Wasshausen, Phytologia, 44:242, 1979.
= Begonia longirostris Bentham, 1845.

Sphenanthera

erosa (Hasskarl) Klotzsch, Bot. Zeitung., 15:182, 1857.—A. de Candolle, Prodr., 15(1): 276, 1864 [= *Casparya erosa* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia erosa Blume, 1827.

multangula Klotzsch, Bot. Zeitung., 15:181, 1857.—A. de Candolle, Prodr., 15(1): 275, 1864 [= *Casperya multangula* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia multangula Blume var. multangula, 1827.
multangula var. *glabrata* (Miquel) Klotzsch, Bot. Zeitung., 15:182, 1857.—A. de Candolle, Prodr., 15(1):276, 1864 [= *Casparya multangula* var. *glabrata* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia multangula var. glabrata Miquel, 1857.

robusta Hasskarl ex Klotzsch, Bot. Zeitung., 15:182, 1857.—A. de Candolle, Prodr., 15(1):275, 1864.
= Begonia robusta Blume var. robusta, 1827.
robusta Hasskarl var. *viridis* Hasskarl, Hort. Bogor. Descr., 346, 1858.—A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya robusta* A. de Candolle, 1864].—Warburg in Engler & Prantl, Nat. Pflanzenfam., 3(6A):146, 1894.
= Begonia robusta Blume var. robusta, 1827.
robusta Hasskarl var. *rubra* Hasskarl, Hort. Bogor. Descr., 349, 1858.—A. de Candolle, Prodr., 15(1):275, 1864 [= *Casparya robusta* var. *rubra* A. de Candolle, 1864].—L.B. Smith & D.C. Wasshausen, Phytologia, 54:472, 1984.
= muricata Blume, 1823.

Steineria

ferruginea Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 185, 1855; Begoniac., 65, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):379, 1861.
= Begonia hookerana Gardner, 1845.

pulchella Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 185, 1855; Begoniac., 65, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):378, 1861.
= Begonia arborescens Raddi var. arborescens, 1820.

Stibadotheca

ferruginea Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 250, 1855, Begoniac., 130, 1855.—A. de Candolle, Prodr., 15(1):269, 1864 [= *Casparya ferruginea* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.

= Begonia ferruginea Linnaeus f. var. ferruginea, 1781.

fuchsiifolia (A. de Candolle) Index Kew., suppl. 1:53, 1902, "*fuchsiaefolia*," pro syn. *Begonia fuchsiifolia* Warburg, 1894.—A. Baranov & F.A. Barkley, Phytologia, 26:220, 1973, sphalma.

= Begonia fuchsiiflora A. Baranov & F.A. Barkley, 1973.

magnifica Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 249, 1855; Begoniac., 129, 1855.—A. de Candolle, Prodr., 15(1):269, 1864 [= *Casparya ferruginea* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.

= Begonia ferruginea Linnaeus f. var. ferruginea, 1781.

trachyptera Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 251, 1855; Begoniac., 131, 1855.—A. de Candolle, Prodr., 15(1):274, 1864 [= *Casparya trachyptera* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.

= Begonia urticae Linnaeus f. var. urticae, 1781.

urticae Klotzsch ex A. de Candolle, Prodr., 15(1):274, 1864, pro syn. *Casparya trachyptera* A. de Candolle, 1864.—L.B. Smith & B.G. Schubert, Caldasia, 4:34, 1946.

= Begonia urticae Linnaeus f. var. urticae, 1781.

Stiradotheca

ferruginea Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 250, 1855; Begoniac., 130, 1855 [= *Stibadotheca ferruginea* Klotzsch, 1855].—A. de Candolle, Prodr., 15(1):269, 1864 [= *Casparya ferruginea* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.

= Begonia ferruginea Linnaeus f. var. ferruginea, 1781.

magnifica Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 249, pl. 12A, 1855; Begoniac., 129, pl. 12A, 1855 [= *Stibadotheca magnifica* Klotzsch, 1855].—A. de Candolle, Prodr., 15(1):269, 1864 [= *Casparya ferruginea* A. de Candolle, 1864].—C. de Candolle, Bull. Herb. Boissier, II, 8:319, 1908.

= Begonia ferruginea Linnaeus f. var. ferruginea, 1781.

trachyptera Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 127, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 251, 1855; Begoniac., 131, 1855 [= *Stibadotheca trachyptera* Klotzsch, 1855].—L.B. Smith & B.G. Schubert, Caldasia, 4:33, 1946.

= Begonia urticae Linnaeus f. var. urticae, 1781.

Tittelbachia

albiflora Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum.

castaneifolia (Otto & Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, "*castaneaefolia.*"

= Begonia castaneifolia hort. Petrop. ex Otto & Dietrich, 1836.

complicata Hasskarl, Hort. Bogor. Descr., 342, 1858.—A. de Candolle, Prodr., 15(1): 399, 1864.

= Begonia complicata A. de Candolle, 1864.

fuchsioides (W.J. Hooker) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126,

1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 226, pl. 10A, 1855; Begoniac., 106, pl. 10A, 1855.—A. de Candolle, Prodr., 15(1):291, 1864.
= Begonia fuchsioides W.J. Hooker, 1847.

hamiltoniana Regel, Ind. Sem. Hort. Petrop., 45, 1869.—A. de Candolle, Prodr., 15(1): 295, 1864 [= *Begonia acuminata* Dryander, 1791].—O.E. Schulz in Urban, Sym. Antil., 7:13, 1911.
= Begonia acutifolia Jacquin, 1787.

miniata (Planchon & Linden) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 226, 1855; Begoniac., 106, 1855.—A. de Candolle, Prodr., 15(1): 291, 1864.
= Begonia fuchsioides var. miniata A. de Candolle, 1864.

Trachelanthus

attenuatus Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 203, 1855; Begoniac., 83, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):383, 1861 [= *Begonia attenuata* A. de Candolle, 1861].—J. Golding and C. Karegeannes, Phytologia, 54:494, 1984.
= Begonia lanceolata Vellozo, 1831.

rhizocarpus Klotzsch, Abh. Königl. Akad. Wiss. Berlin, 1854, p. 203, pl. 8C, 1855; Begoniac., 83. pl. 8C, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):382, 1861 [= *Begonia rhizocarpus* Fischer ex A. de Candolle, 1861].—Wawra, Bot. Ergeb. Maxim. Brasil., 53, pl. 49, 1866.
= Begonia depauperata Schott, 1827.

Trachelocarpus

attenuatus C. Mueller in Walpers, Ann. Bot. Syst., 4:910, 1857.—A. de Candolle in Martius, Fl. Bras., 4(1):383, 1861 [= *Begonia attenuata* A. de Candolle, 1861].—J. Golding & C. Karegeannes, Phytologia, 54:494, 1984.
= Begonia lanceolata Vellozo, 1831.

rhizocarpus C. Mueller in Walpers, Ann. Bot. Syst., 4:910, 1858.—A. de Candolle in Martius, Fl. Bras., 4(1):382, 1861 [= *Begonia rhizocarpa* Fischer ex A. de Candolle, 1861].—Wawra, Bot. Ergeb. Maxim. Brasil., 53, pl. 49, 1866.
= Begonia depauperata Schott, 1827.

Trendelenburgia

fruticosa Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 123, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 172, pl. 3B, 1855; Begoniac., 52, pl. 3B, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):377, 1861.
= Begonia fruticosa A. de Candolle, 1861.

Trilomisa

undulata Rafinesque, Fl. Tellur., 2:91, 1836.
= Begonia undulata Schott, 1827.

Wageneria

brasiliensis Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 239, 1855; Begoniac., 119, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):362, 1861.
= Begonia polygonifolia A. de Candolle, 1861.

convolvulacea Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 236, 1855; Begoniac., 116, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):367, 1861.
= Begonia convolvulacea A. de Candolle, 1861.

deflexa Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 233, 1855; Begoniac., 113, 1855.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

dichotoma (Jacquin) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 237, 1855; Begoniac., 117, 1855.—A. de Candolle, Prodr., 15(1):367, 1864.
= Begonia dichotoma Jacquin, 1790.

fagifolia (Fischer) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 233, pl. 10C, 1855; Begoniac., 113, pl. 10C, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):363, 1861.
= Begonia epibaterium Martius ex A. de Candolle var. epibaterium, 1861, pro parte.
= Begonia fagifolia Fischer, 1836, pro parte.

glabra (Aublet) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 235, 1855; Begoniac., 115, 1855.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

glandulosa Klotzsch, herb. Berol. ex A. de Candolle, Prodr., 15(1):389, 1864, pro syn. *Begonia glandulosa* sensu A. de Candolle, 1864.—J. Golding, Phytologia, 40:460, 1978.
= Begonia multinervia Liebmann, 1853.

hispida Klotzsch ex A. de Candolle in Martius, Fl. Bras., 4(1):364, 1861, pro syn. Begonia hispida Schott var. hispida, 1827.

huegelii Klotzsch in append. Gen. & Sp. Herb. Berol., 2, 1855, "*hugellii*," non visus.—A. de Candolle in Martius, Fl. Bras., 4(1):366, 1861.
= Begonia huegelii A. de Candolle, 1861.

incisoserrata Klotzsch ex A. de Candolle in Martius, Fl. Bras., 4(1):374, 1861, sphalmate pro *Scheidweilera incisoserrata* Klotzsch, 1855.
= Begonia incisoserrata A. de Candolle, 1861.

longiceps (W.J. Hooker) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, sphalmate pro *Wageneria longipes*, 1855.

longipes (W.J. Hooker) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 237, 1855; Begoniac., 117, 1855.—A. de Candolle, Prodr., 15(1):365, 1864 [= *Begonia longipes* W.J. Hooker, 1830].—Irmscher, Webbia, 12:506, 1957.
= Begonia reniformis Dryander, 1791.

lucida (Otto & Dietrich) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 234, 1855; Begoniac., 114, 1855.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

montana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 235, 1855; Begoniac., 115, 1855.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.
= Begonia glabra Aublet var. glabra, 1775.

moritziana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum.—A. de Candolle, Prodr., 15(1): 292, 1864.
= Begonia meridensis A. de Candolle, 1864.

reniformis (Dryander) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854.—A. de Candolle in Martius, Fl. Bras., 4(1):368, 1861 [= *Begonia longipes* var. *laticordata* A. de Candolle, 1861].—Irmscher, Webbia, 12:506, 1957.
= Begonia reniformis Dryander, 1791.

rugosa Klotzsch, Monatsber. Königl. Preuss.

Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 236, 1855; Begoniac., 116, 1855 [= *Wageneria convolvulacea* Klotzsch, 1855].—A. de Candolle in Martius, Fl. Bras., 4(1):367, 1861.
= Begonia convolvulacea A. de Candolle, 1861.

scabrida Klotzsch ex A. de Candolle, Prodr., 15(1):367, 1864, pro syn. Begonia scabrida A. de Candolle, 1864.

scandens Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum.

schottiana Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854, nomen nudum; Abh. Königl. Akad. Wiss. Berlin 1854, p. 236, 1855; Begoniac., 116, 1855, pro syn. *Wageneria convolvulacea* Klotzsch, 1855.—A. de Candolle in Martius, Fl.Bras., 4(1):367, 1861.
= Begonia convolvulacea A. de Candolle, 1861.

tomentosa (Schott) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854.—A. de Candolle in Martius, Fl. Bras., 4(1):364, 1861.
= Begonia hispida Schott var. hispida, 1827.

vitifolia (Schott) Klotzsch, Monatsber. Königl. Preuss. Akad. Wiss. Berlin, 126, 1854; Abh. Königl. Akad. Wiss. Berlin 1854, p. 236, 1855; Begoniac., 116, 1855.—A. de Candolle in Martius, Fl. Bras., 4(1):369, 1861 [= *Begonia vitifolia* Schott, 1827].—L.B. Smith & D.C. Wasshausen, Phytologia, 52:446, 1983.
= Begonia reniformis Dryander, 1791.

Weilbachia

pustulata (Liebmann) Klotzsch, Abh. Königl. Akad. Wiss. Berlin 1854, p. 241, 1855; Begoniac., 121, 1855.—A. de Candolle, Prodr., 15(1):345, 1864.
= Begonia pustulata Liebmann, 1853.

repians Klotzsch & Oersted, Abh. Königl. Akad. Wiss. Berlin 1854, p. 240, pl. 11A, 1855; Begoniac., 120, pl. 11A, 1855.—A. de Candolle, Prodr., 15(1):345, 1864 [= *Begonia liebmannii* A. de Candolle, 1864].—L.B. Smith & B.G. Schubert, Fieldiana: Bot., 24:174, 1961.
= Begonia ludicra A. de Candolle, 1859.

Names Prior to Linnaeus' *Species Plantarum*, 1753

The names are listed in chronological order, followed by their correct *Begonia* names.

Totoncaxoxo coyollin Hernandez, Nova Plantarum, Animalium et Mexicanarum Historia, 195, 1651.—Sessé & Mociño, Pl. Nov. Hisp., 162, 1890 [= *Begonia tuberosa* sensu Sessé & Mociño, 1890].—L.B. Smith & B.G. Schubert, Contr. Gray Herb., 154:27, 1945.
= Begonia gracilis var. martiana A. de Candolle, 1864.

Tsjeria-narinampuli Rheede, Hort. Mal., 9:167, pl. 86, 1689.—Lamarck, Encyc., 1:393, 1785.
= Begonia malabarica Lamarck, 1785.

Aceris fructu herba anomala, flore tetrapetalo albo, Sloane, Cat. Pl. Jam., 83, 1696; Nat. Hist. Jam., 1:199, pl. 127, 1707.—Jacquin, Collectanea, 1:128, 1787.
= Begonia acutifolia Jacquin, 1787.

Begonia purpurea maxima, folio aurito Plumier, Bot. Amer., vol. 3, pl. 5: figs. 1, 2, 1689–1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, 1700; Cat. Pl. Amer., vol. 2:20, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753.—Plumier in Burman, Pl. Amer., vol. 2, pl. 45: fig. 1, 1756.—J. Golding, Phytologia, 45:221, 1980.
= Begonia obliqua Linnaeus var. obliqua, 1753.

Begonia nivea maxima, folio aurito Plumier, Bot. Amer., vol. 3, pl. 6, 1689–1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, pl.

442, 1700; Cat. Pl. Amer., 2:21, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753.—Plumier in Burman, Pl. Amer., vol. 2, pl. 45: fig. 1, 1756.—J. Golding, Phytologia, 45:221, 1980.

= Begonia obliqua Linnaeus var. obliqua, 1753.

Begonia roseo flore, folio aurito, minor et glabra Plumier, Bot. Amer., vol. 3, pl. 2, 1689–1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, 1700; Cat Pl. Amer., 20, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753 [= *Begonia obliqua* var. *beta* Linnaeus, 1753].—O.E. Schulz in Urban, Symb. Antil., 7:15, 1911.—J. Golding, Phytologia, 45:247, 1980.

= Begonia brachypoda O.E. Schulz, 1911.

Begonia roseo flore, folio aurito, minor & hirsuta Plumier, Bot. Amer., vol. 3, pl. 1, 1689-1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, 1700; Cat. Pl. Amer., 20, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753 [= *Begonia obliqua* var. *gamma* Linnaeus, 1753].—Plumier in Burman, Pl. Amer., vol. 2, pl. 45: fig. 2, 1756.—Lamarck, Encycl., 1:394, 1785.—J. Golding, Phytologia, 39:115, 1978.

= Begonia repens Lamarck var. repens, 1785.

Begonia roseo flore, folio orbiculari Plumier, Bot. Amer., vol. 3, pl. 3, 1689–1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, 1700; Cat. Pl. Amer., 20, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753 [= *Begonia obliqua* var. *delta* Plumier, 1753].—Plumier in Burman, Pl. Amer., vol. 2, pl. 45: main fig., 1756.—Lamarck, Encycl., 1:394, 1785.

= Begonia rotundifolia Lamarck, 1785.

Begonia roseo flore, foliis acutioribus auritis et late crenatis Plumier, Bot. Amer., vol. 3, pl. 4, 1689–1697, ined.; in Tournefort, Inst. Rei Herb., app., 660, 1700; Cat. Pl. Amer., 20, 1703.—Linnaeus, Sp. Pl., 2:1056, 1753 [= *Begonia obliqua* var. *epsilon* Linnaeus, 1753].—Plumier in Burman, Pl. Amer., vol. 2, pl. 45: fig. 3, 1756.—A. de Candolle, Prodr., 15(1):295, 1864.

= Begonia plumieri A. de Candolle var. plumieri, 1864.

Acetosa nigritarum Kamel in J. Ray, Herb. Philipp., 3(app):14, 1704.—Steudel, Nom. Bot., 1:104, 1821.

= Begonia nigritarum Steudel, 1821.

Sjukaido Kaempfer, Amoen. Exot. Fasc., 5:888, 1712.—Thunberg, Fl. Jap., 231, 1784 [= *Begonia obliqua* sensu Thunberg, 1784, non Linnaeus, 1753].—Kaempfer, Icon. Select. Pl., pl. 20, 1791.—Dryander, Trans. Linn. Soc., 1:164, 1791 [= *grandis* Dryander, 1791].—Irmscher, Mitt. Inst. Allg. Bot. Hamburg, 10:492, 1939.

= Begonia grandis subsp. evansiana Irmscher, 1939.

Begonia hirsuta, flore albo, folio aurito, fructu coronato, Barrere, Hist. Fr. Equin., 21, 1741.—Linnaeus, Sp. Pl., 2:1056, 1753 [= *Begonia obliqua* var. *zeta* Linnaeus, 1753].—Aublet, Hist. Pl. Guiane, 2:913, pl. 348, 1775.

= Begonia hirsuta Aublet, 1775.

Empetrum acetosum f. *album* Rumphius, Herb. Amboinese, 5:457, pl. 169: fig. 2, 1747.—Merrill, Interp. Herb. Amboin., 379, 1917.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:471, 1984.

= Begonia muricata Blume, 1823.

Empetrum acetosum f. *cordifolium* Rumphius, Herb. Amboinense, 5:457, 1747.—Merrill, Interp. Herb. Amboin., 379, 1917.—L.B. Smith & D.C. Wasshausen, Phytologia, 54:471, 1984.

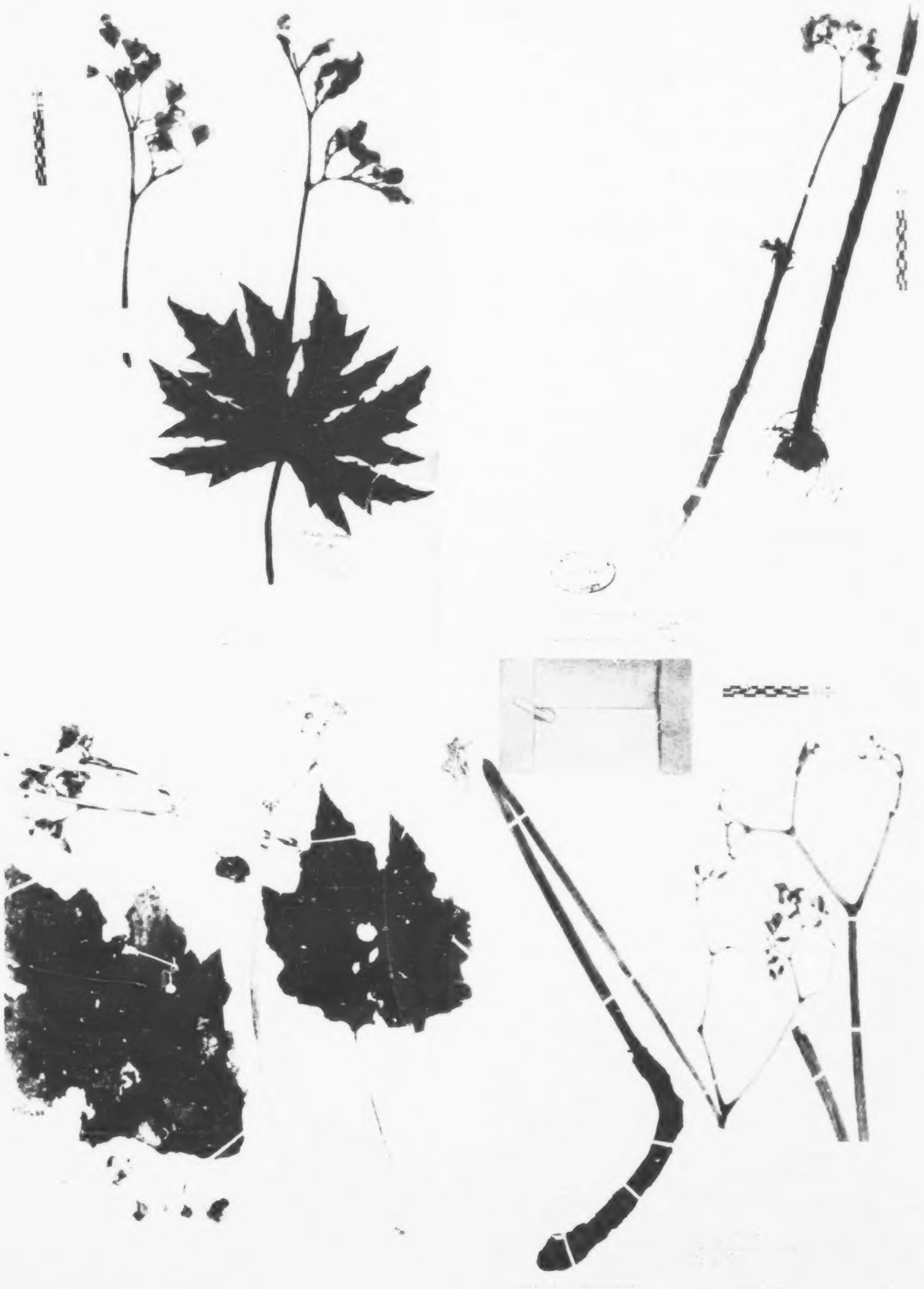
= Begonia mollis A. de Candolle, 1864.

Empetrum acetosum f. *rubrum* Rumphius, Herb. Amboinense, 5:457, 1747.—Hasskarl, Neu. Schuss. Rumph., 146, 1866.—Merrill, Interp. Herb. Amboin., 379, 1917.—L.B. Smith and D.C. Wasshausen, Phytologia, 54:471, 1984.

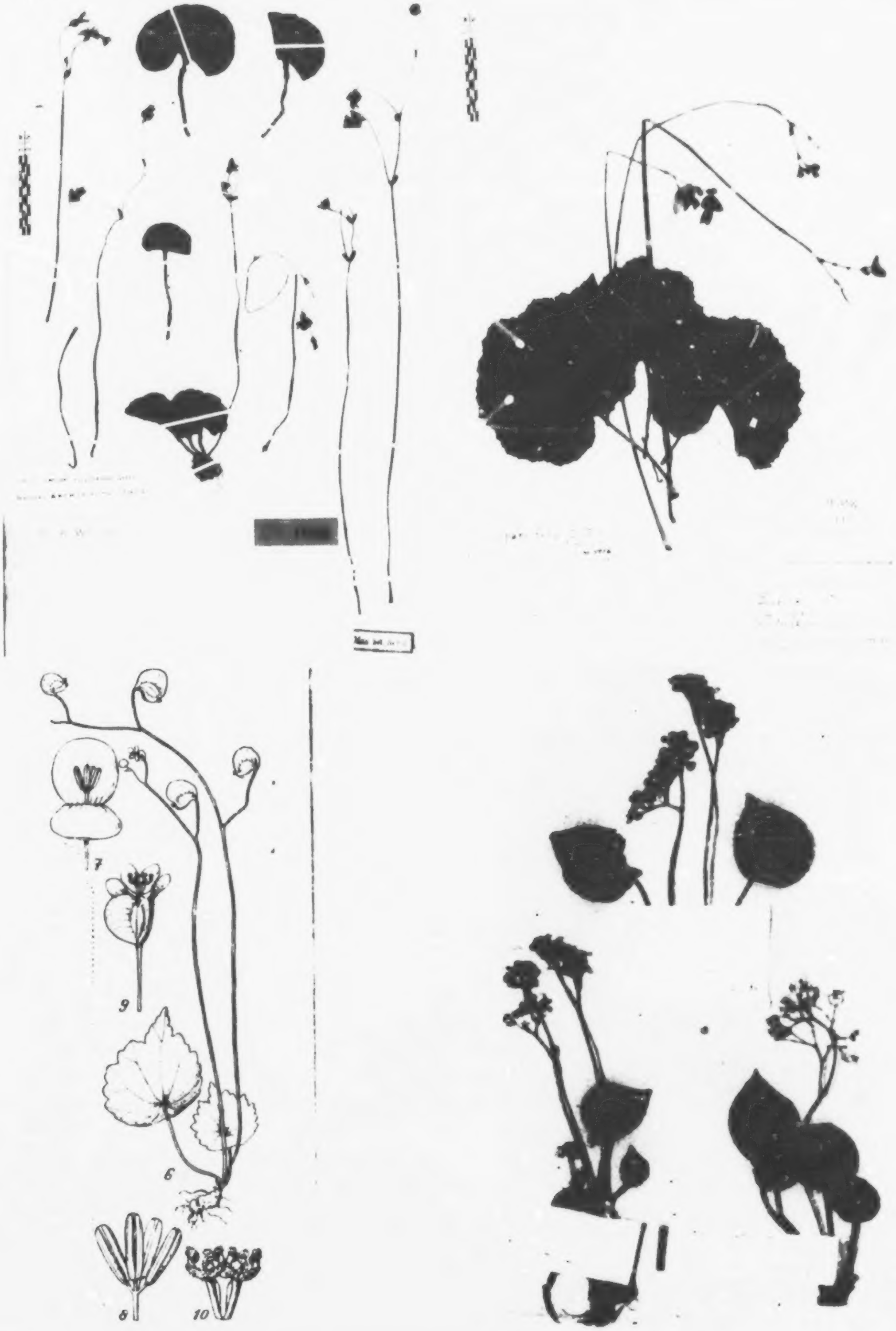
= Begonia muricata Blume, 1823.

Rumex sylvestris scandens, foliis cordato-angulatis ab altera parte majoribus Browne, Hist. Jam., 203, 1756, synonymo excluso.—O.E. Schulz in Urban, Symb. Antil., 7:6, 1911.—Golding, Phytologia, 45:246, 1980.

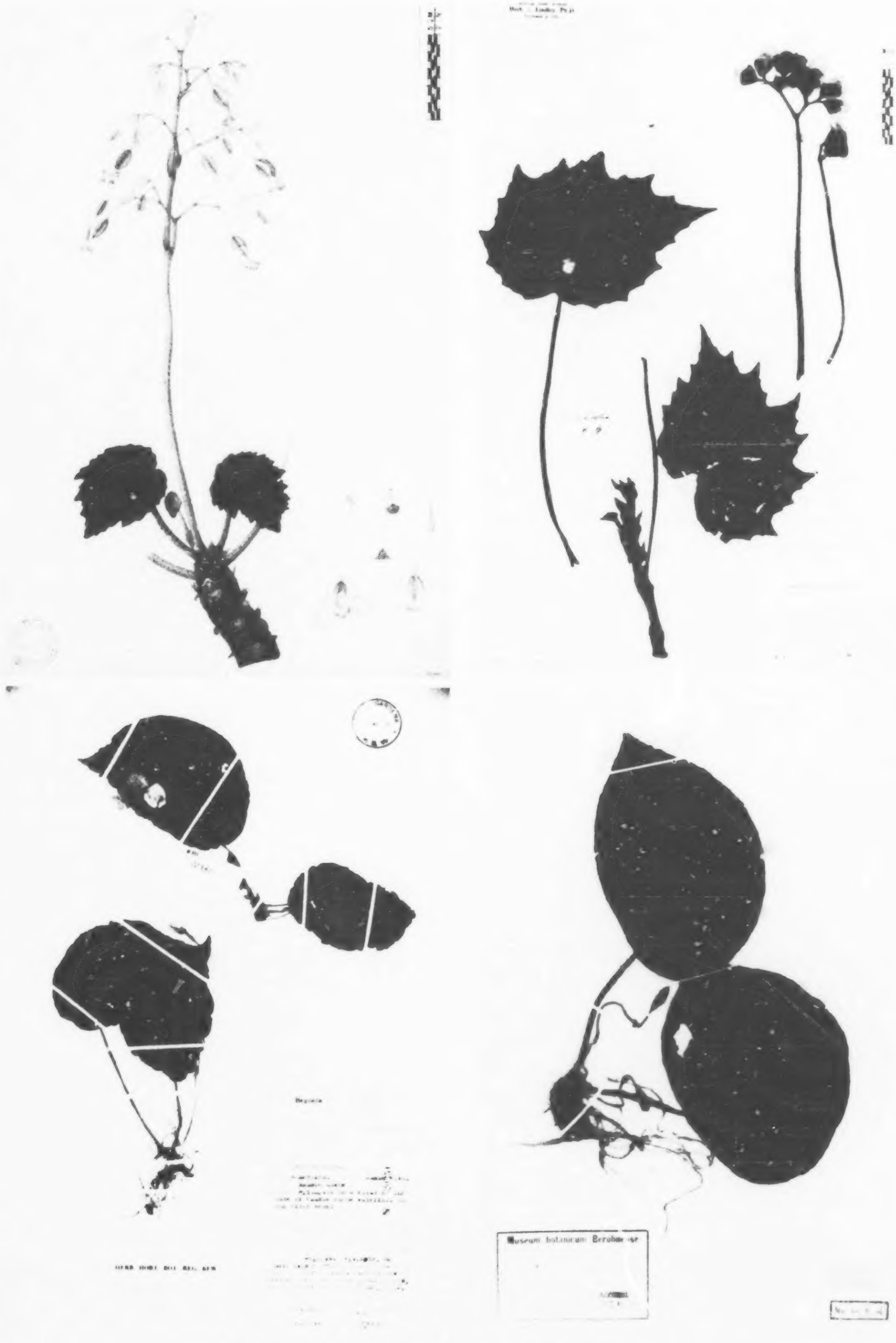
= Begonia glabra Aublet var. glabra, 1775, pro parte.



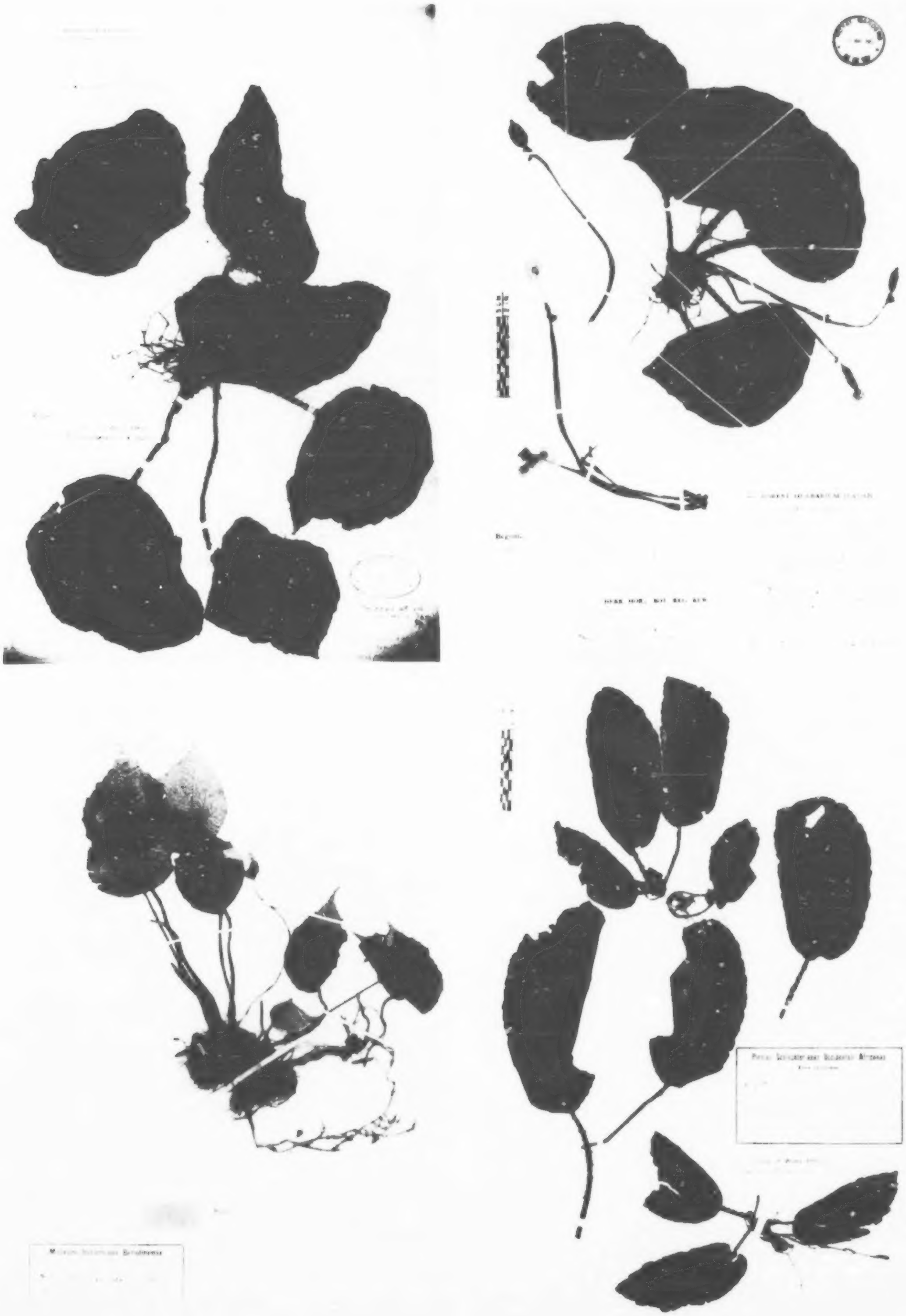
1.1, *B. crassicaulis;* 1.2, *B. parodiana;* 1.3, *B. erythrocarpa;* 1.4, *B. compacticaulis.*



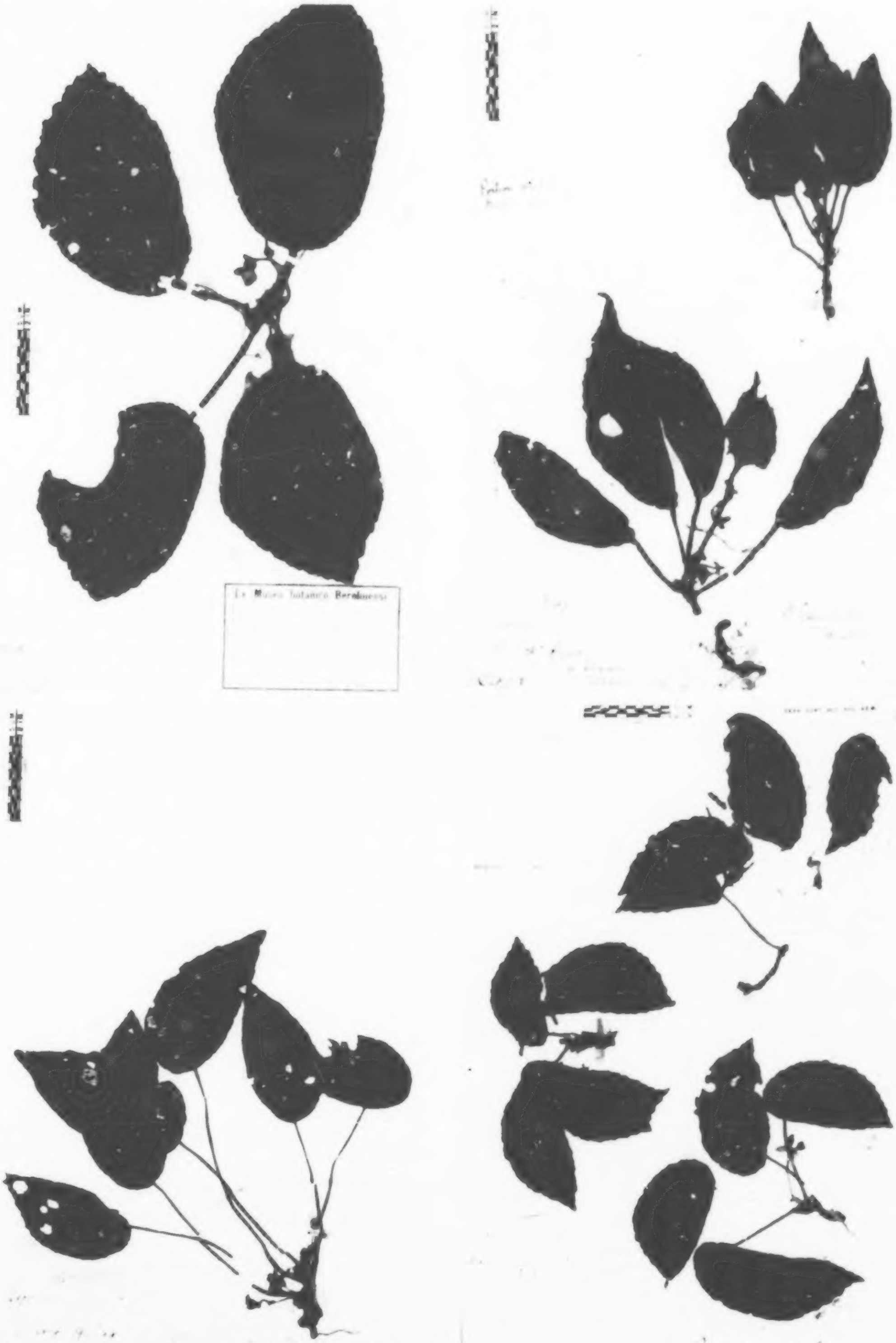
1.5, *B. anemoniflora;* 1.6, *B. parcifolia;* 2.1, *B. decaryana;* 2.2, *B. conchifolia.*


Museum botanicum Berolinense
Begonia

2.3, *B. polygonata;* 2.4, *B. lindleyana;* 2.5, *B. ficicola;* 2.6, *B. microsperma.*

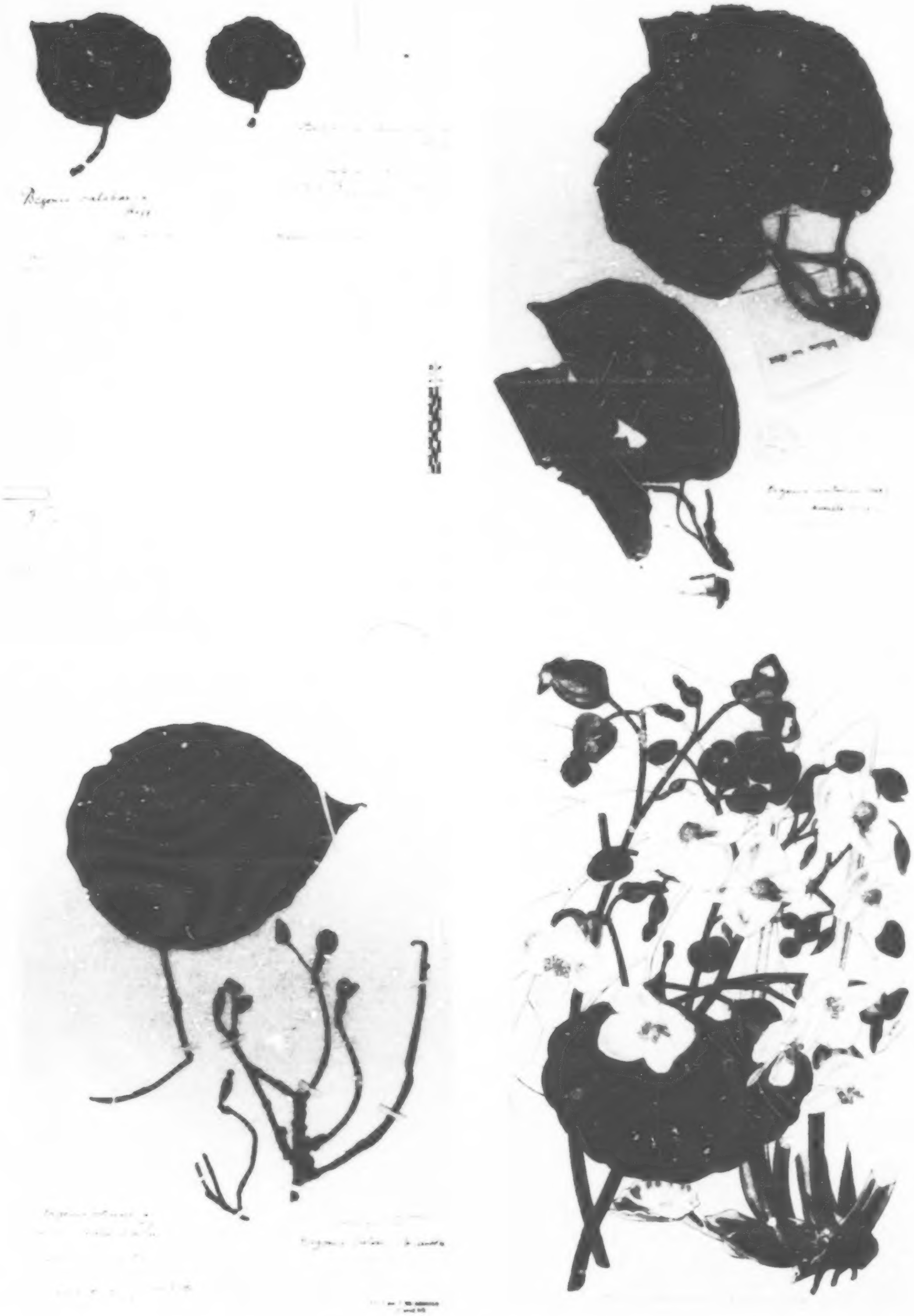


2.7, *B. lacunosa*; 2.8, *B. staudtii*; 2.9, *B. schaeferi*; 2.10, *B. schlechteri*.

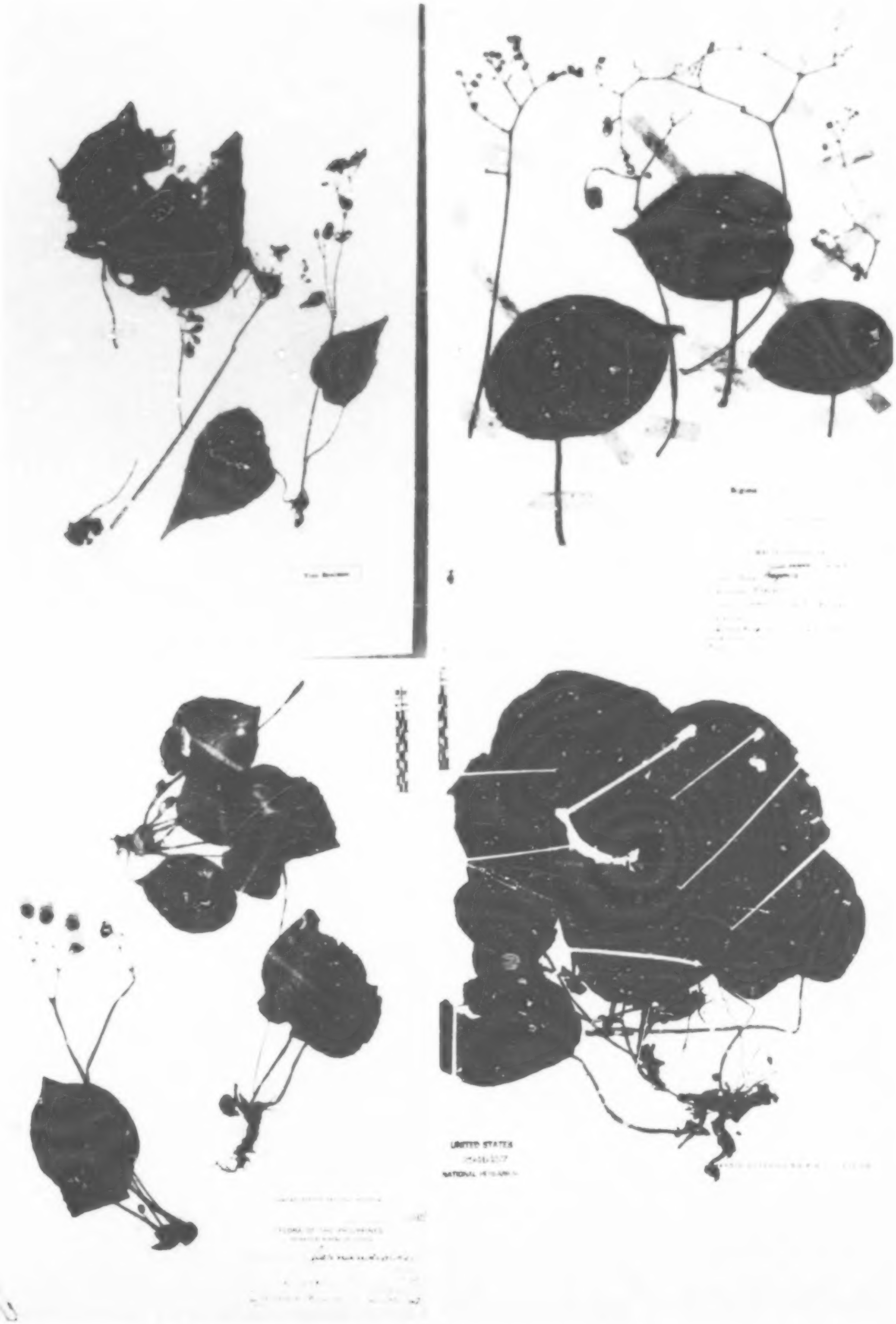

Ex Museo botanico Berolinensi

2.11, *B. laporteifolia;* 2.12, *B. hirsutula;* 2.13, *B. clypeifolia;* 2.14, *B. anisosepala.*

2.15, *B. mayombensis*; 2.16, *B. scutifolia*; 2.17, *B. gentilii*; 2.18, *B. vankerckhovenii*.



2.19, *B. quadrialata;* 2.20, *B. scutulum;* 2.21, *B. potamophila;* 2.22, *B. albo-coccinea.*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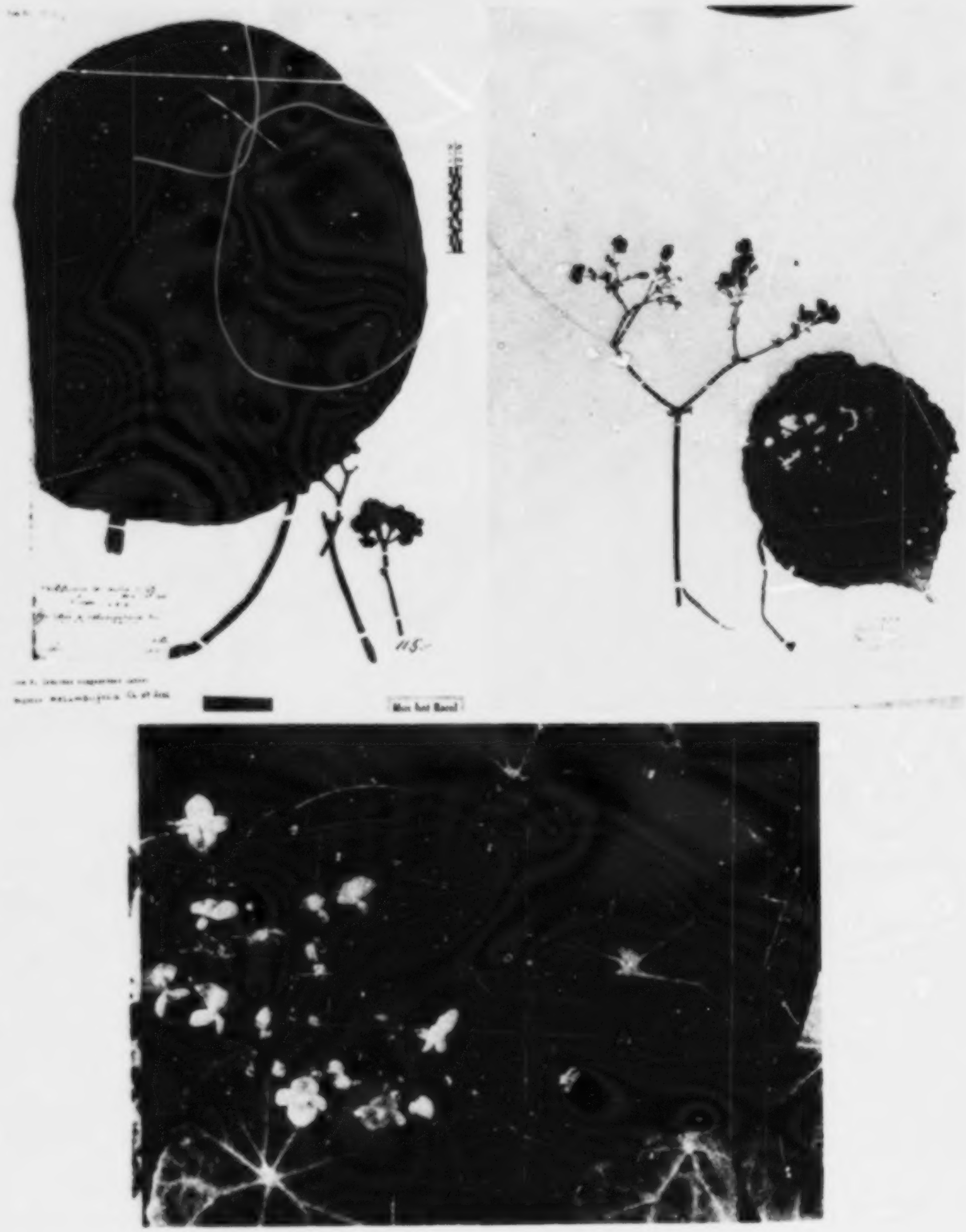
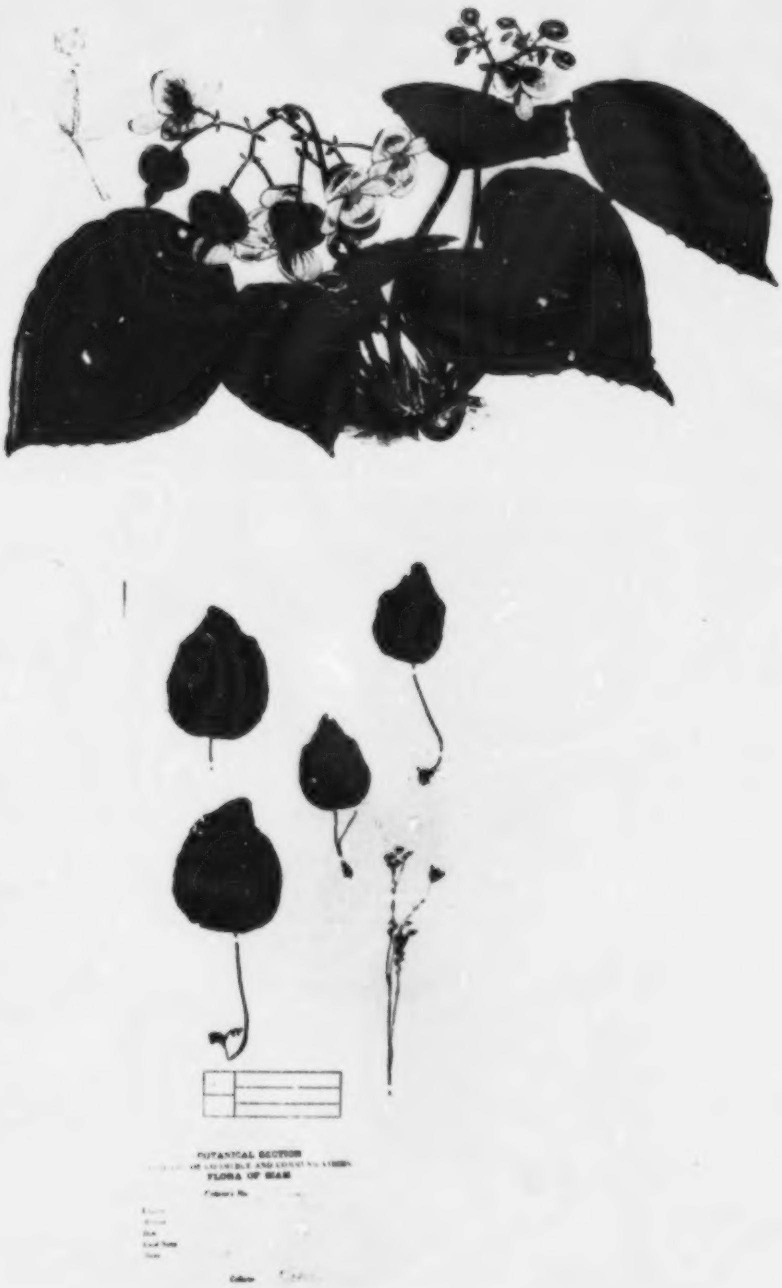
FLORA OF THE PHILIPPINES

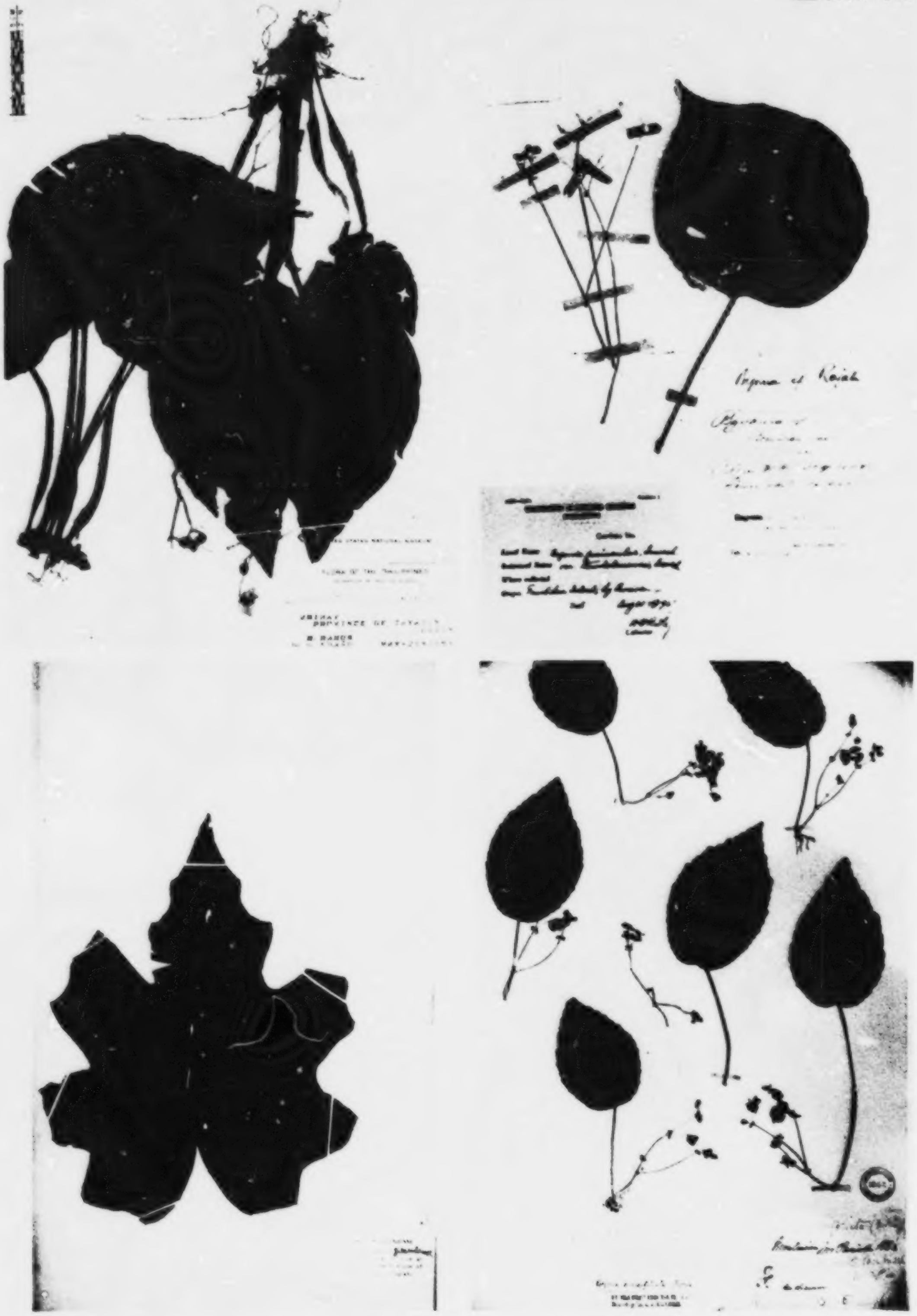
2.23, *B. rubella;* 2.24, *B. kingiana;* 2.25, *B. hernandioides;* 2.26, *B. peltatifolia.*



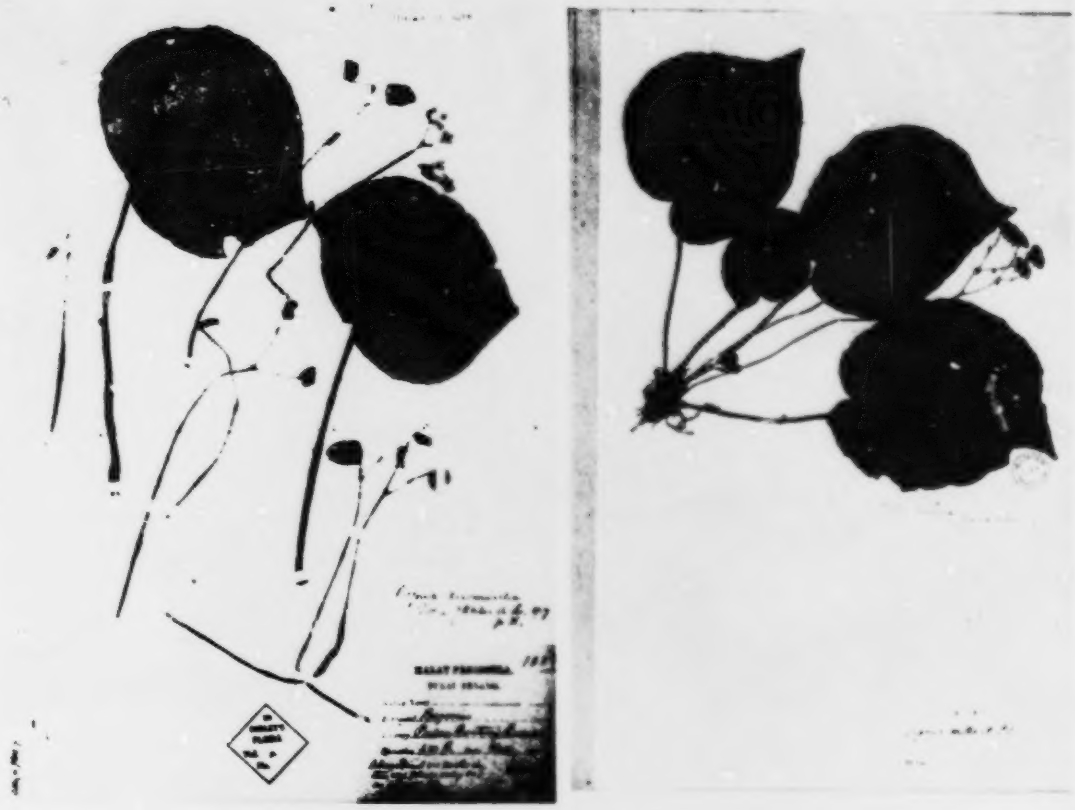
2.27, *B. nelumbiifolia*; 2.28, *B. serotina*; 2.29, *B. goegoensis*.


BOTANICAL SECTION
FLORA OF SIAM

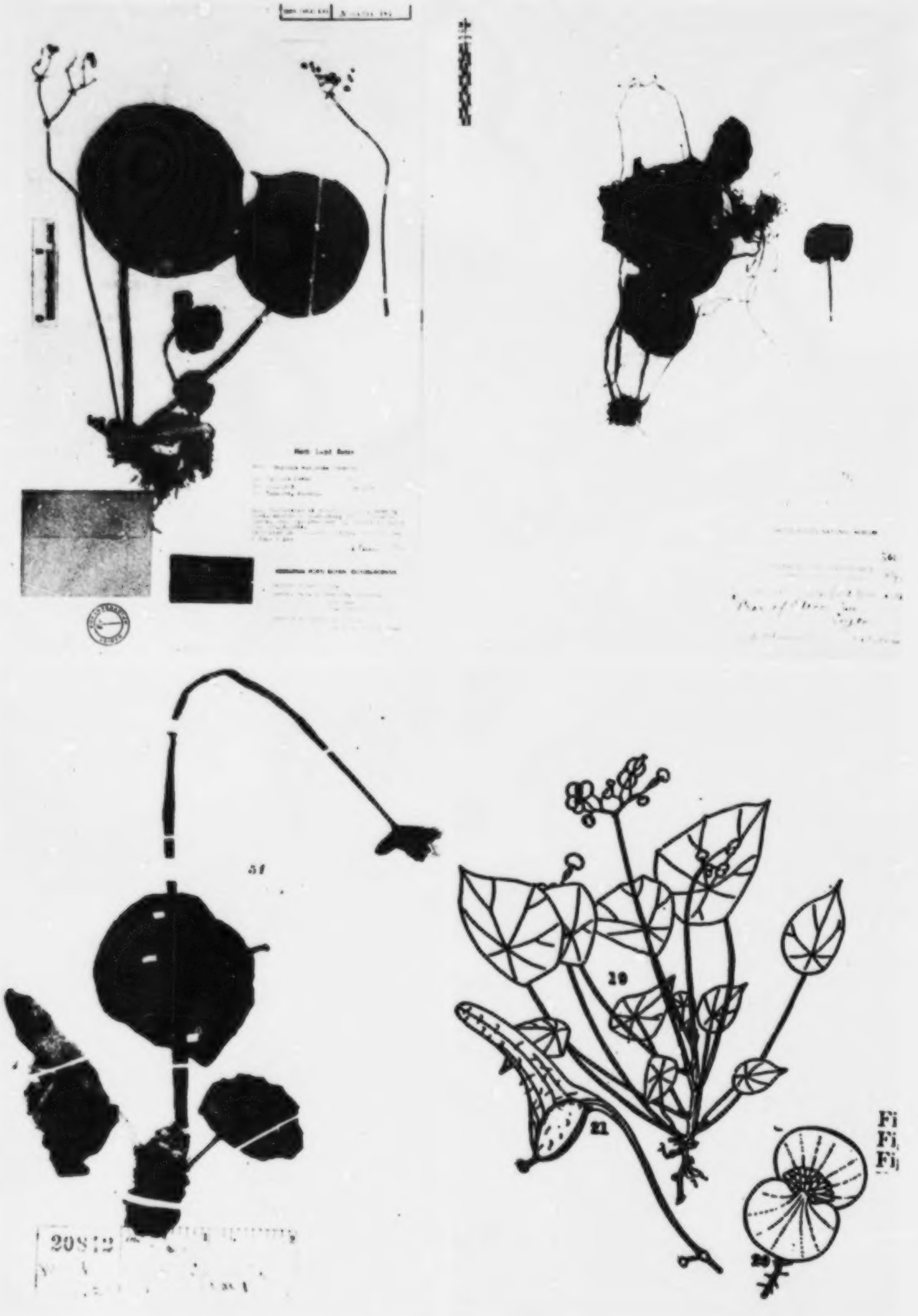
2.30, *B. coriacea*; 2.31, *B. rabilii.*



2.32, *B. tayabensis;* 2.33, *B. peninsulae* subsp. *tambelanensis;* 2.34, *B. corzoensis;* 2.35, *B. subperfoliata.*



2.36, *B. eiromischa;* 2.37, *B. mollis.*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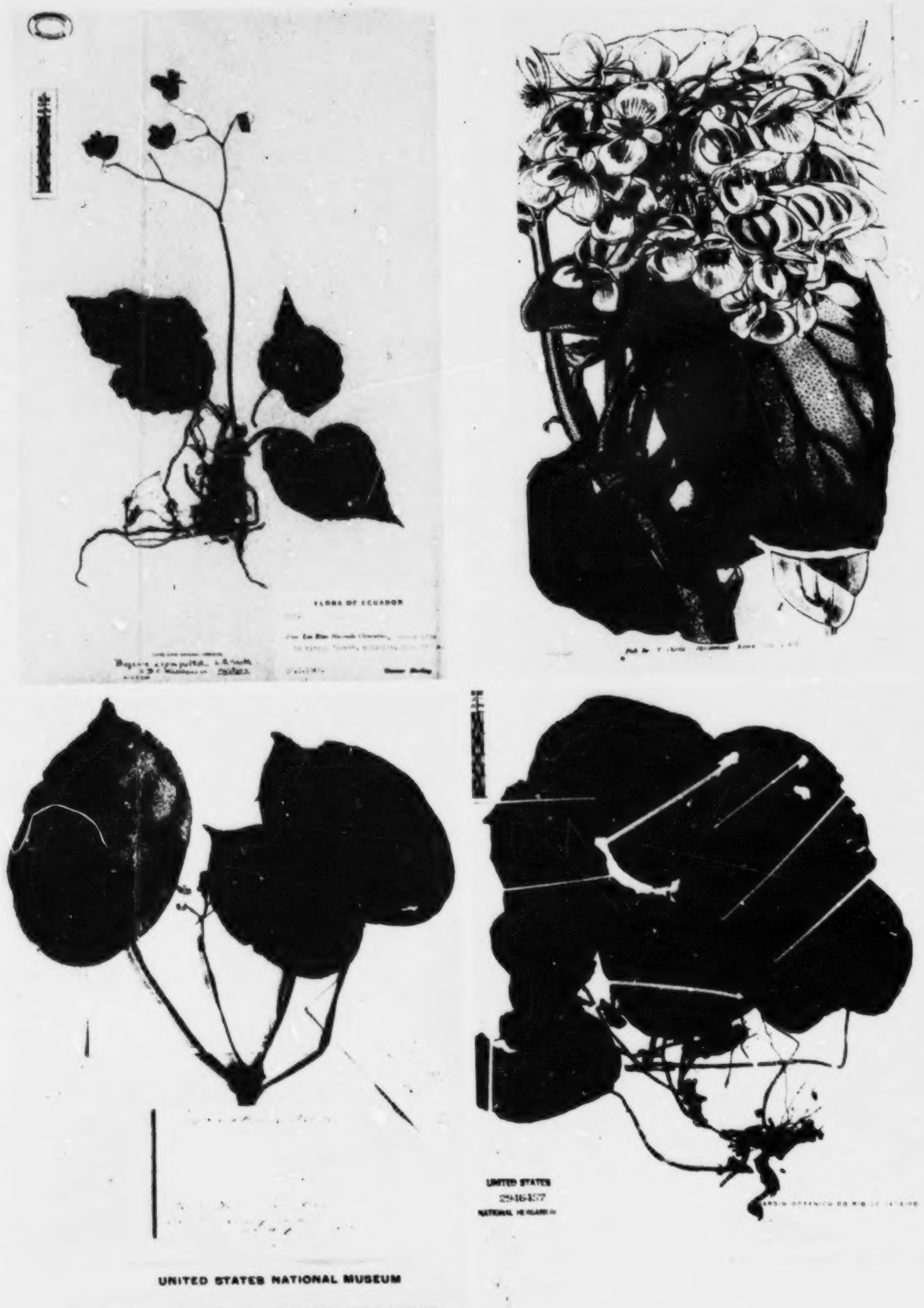
2.38, *B. sudjanae;* 2.39, *B. rufipila;* 2.40, *B. fellererana;* 2.41, *B. calderonii.*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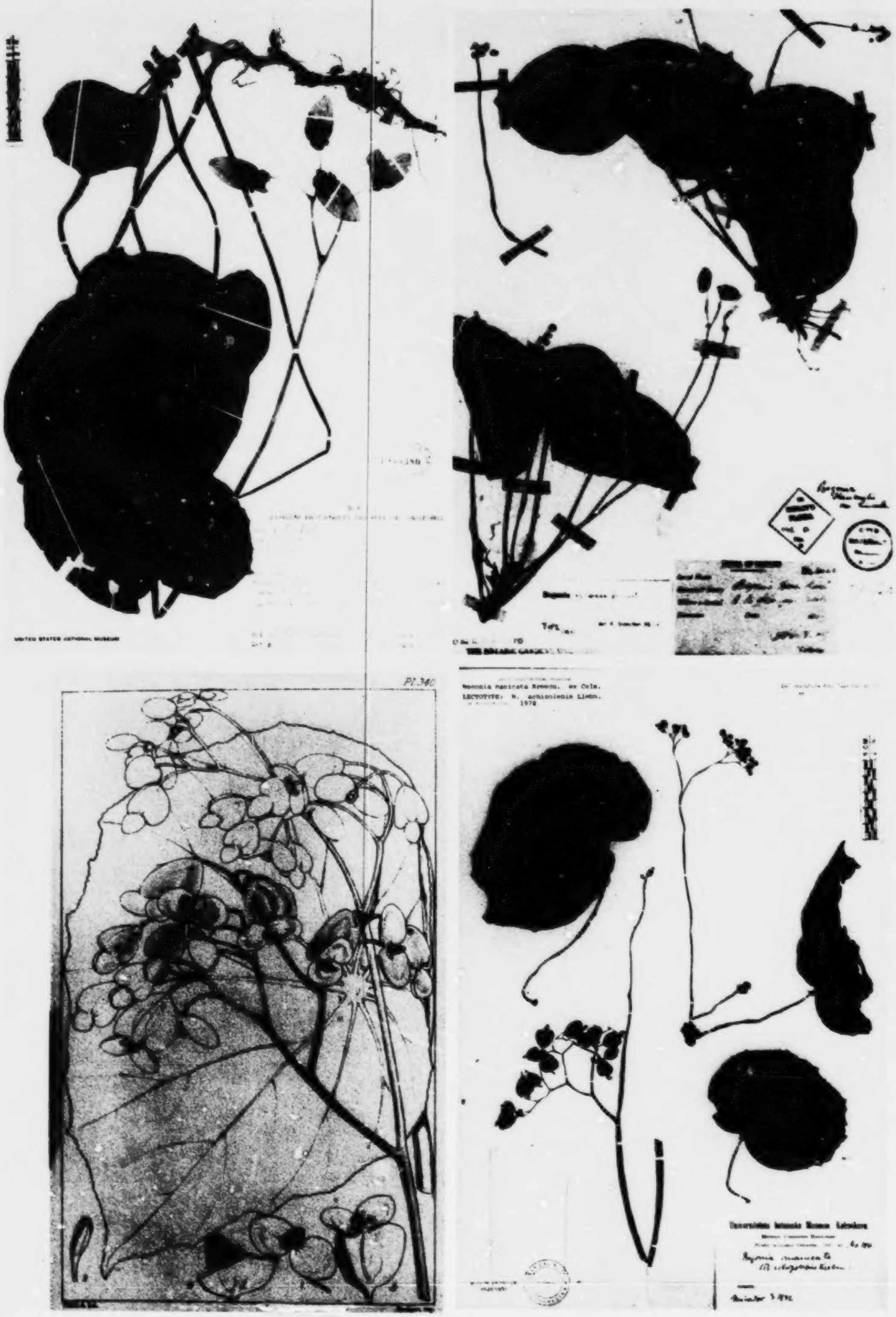
JARDIM BOTANICO DO RIO DE JANEIRO
UNITED STATES NATIONAL MUSEUM
TYPES OF THE DELESSERT HERBARIUM
Rockefeller Foundation Fund for Photographing Type Specimens

2.42, *B. asympeltata;* 2.43, *B. sunorchis;* 2.44, *B. concinna;* 2.45, *B. peltifolia.*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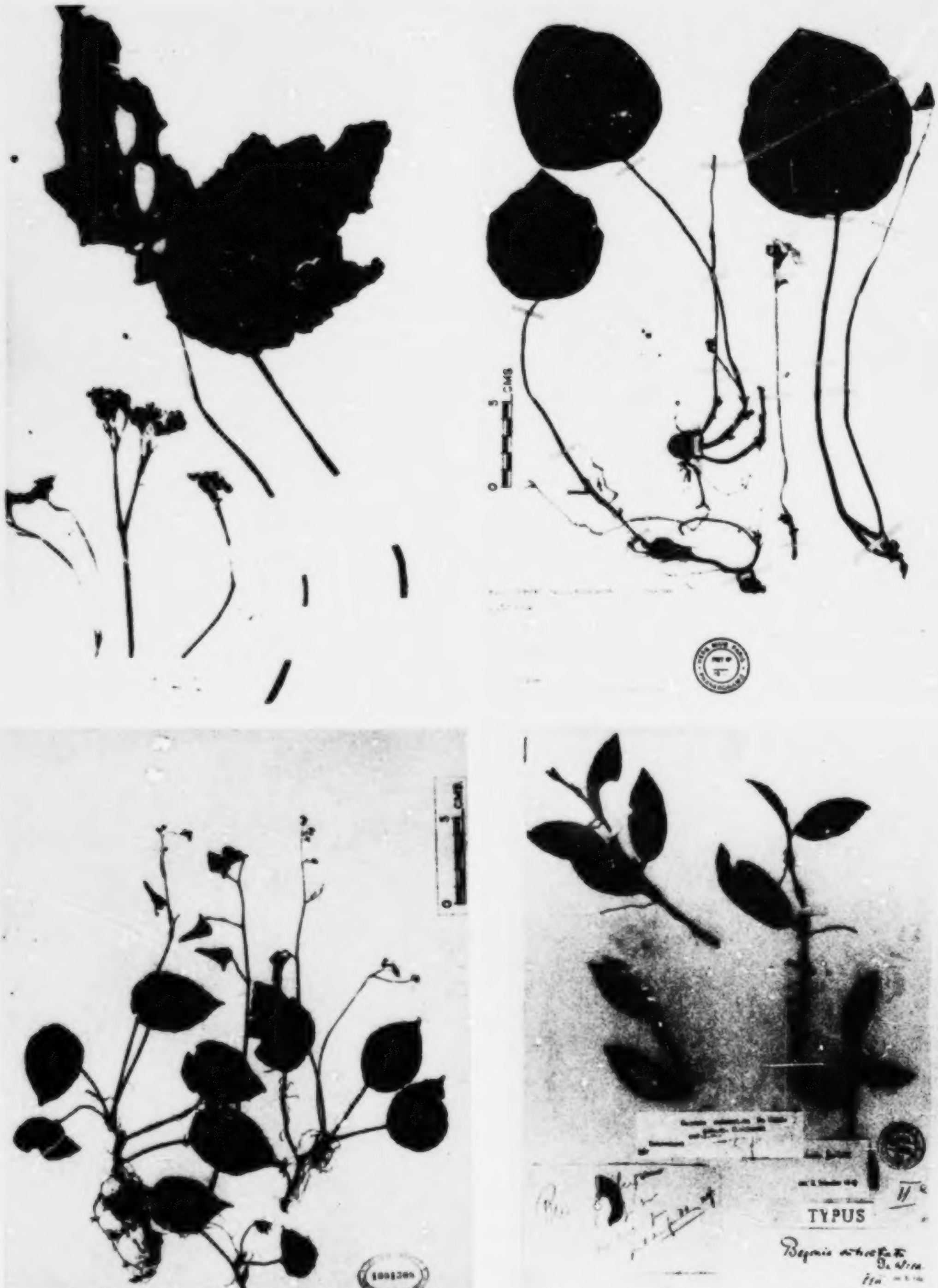
Pl. 340
Begonia manicata Brongn. ex Cels.
LECTOTYPE: B. schizolepis Liebm.
1978

2.46, *B. paulensis;* 2.47, *B. ignorata;* 3.1, *B. sparsipila;* 3.2, *B. manicata.*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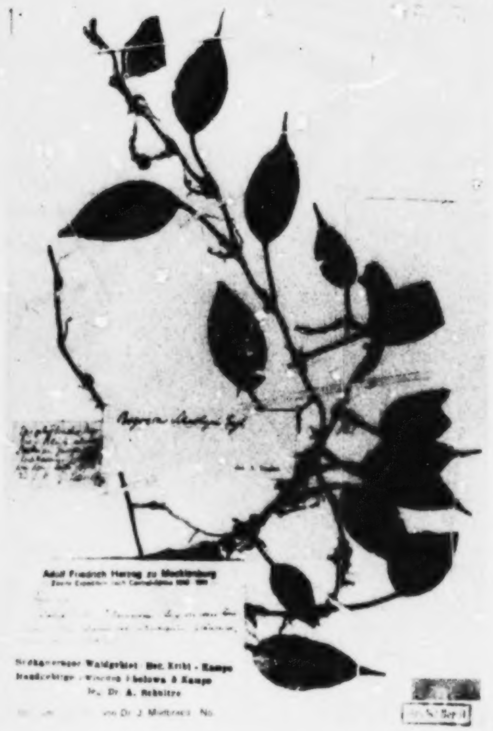
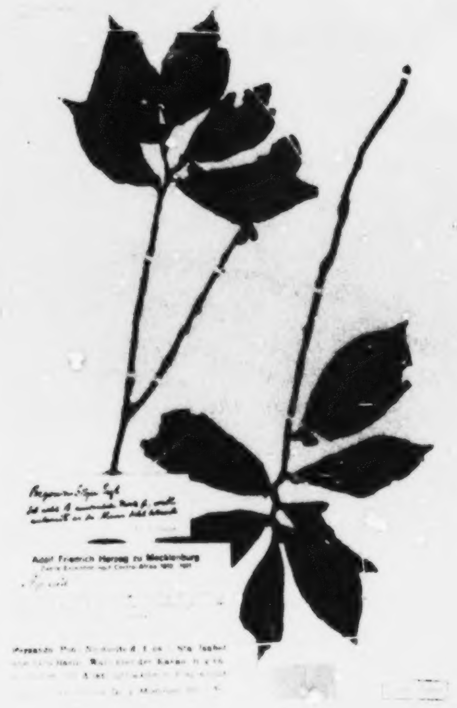
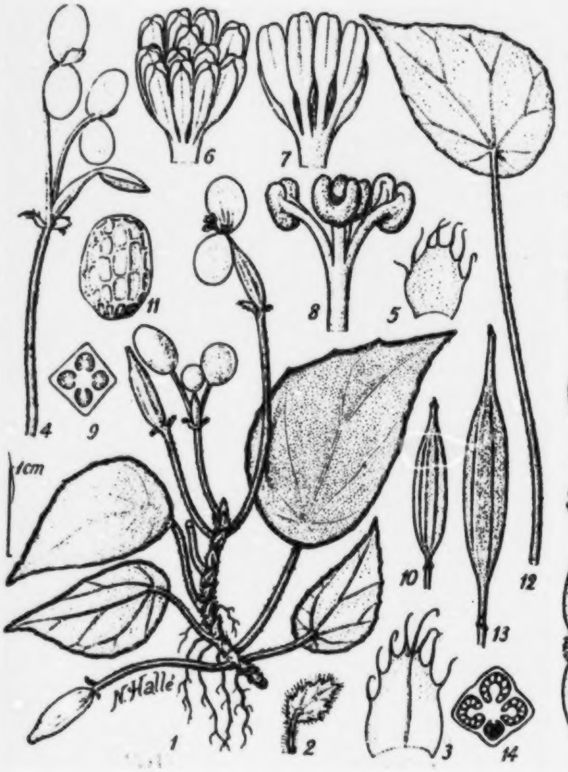
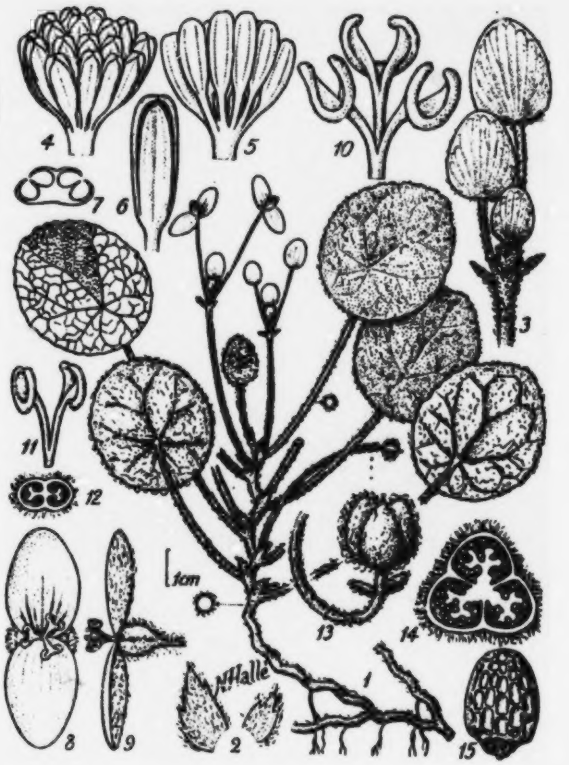
CMS
TYPUS

3.3, *B. josephii*; 3.4, *B. marojejyensis*; 3.5, *B. militaris*; 3.6, *B. subscutata*.

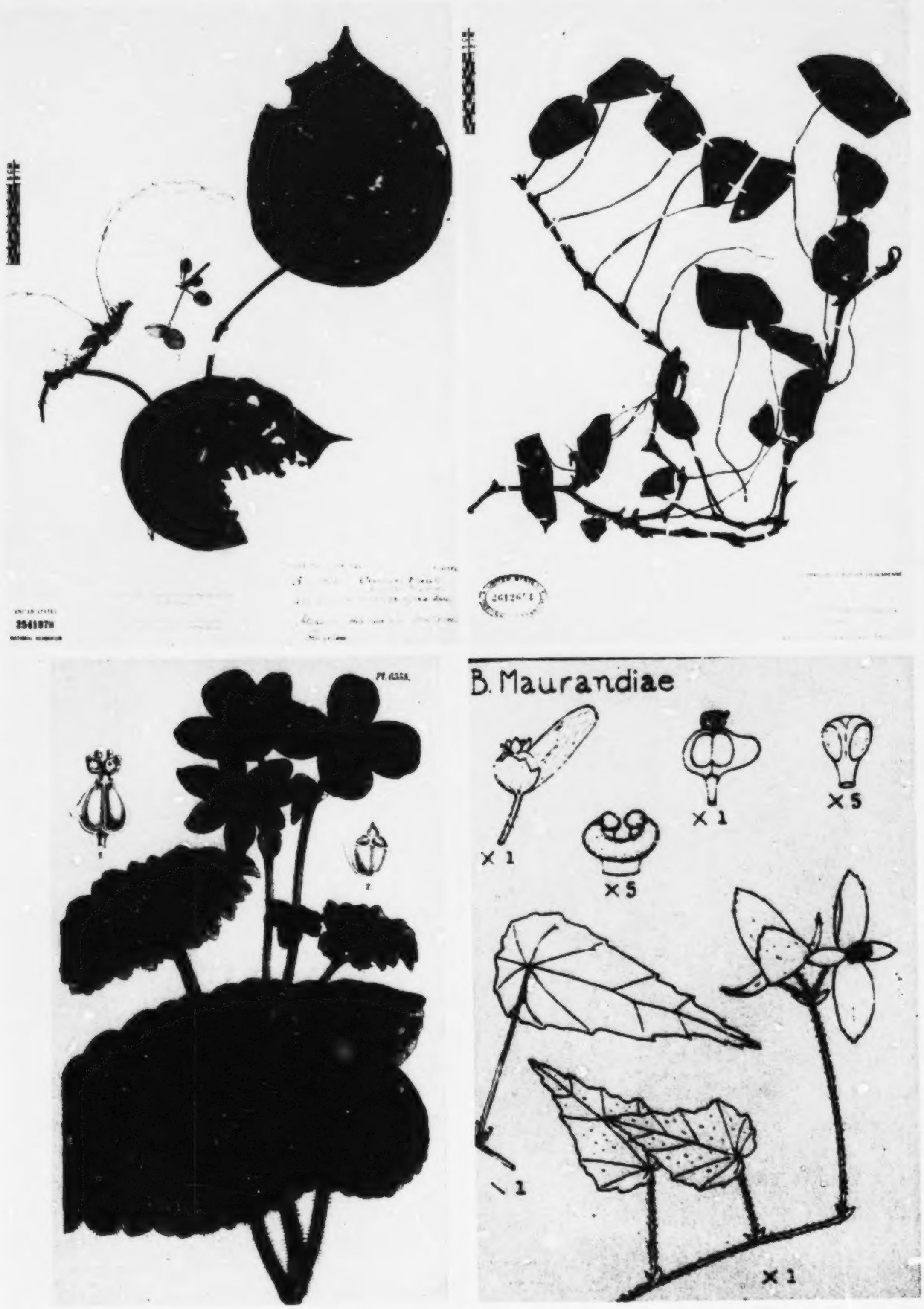

Adolf Friedrich Herzog zu Mecklenburg
leg. Dr. A. Schultze
von Dr. J. Mildbraed No.


Adolf Friedrich Herzog zu Mecklenburg

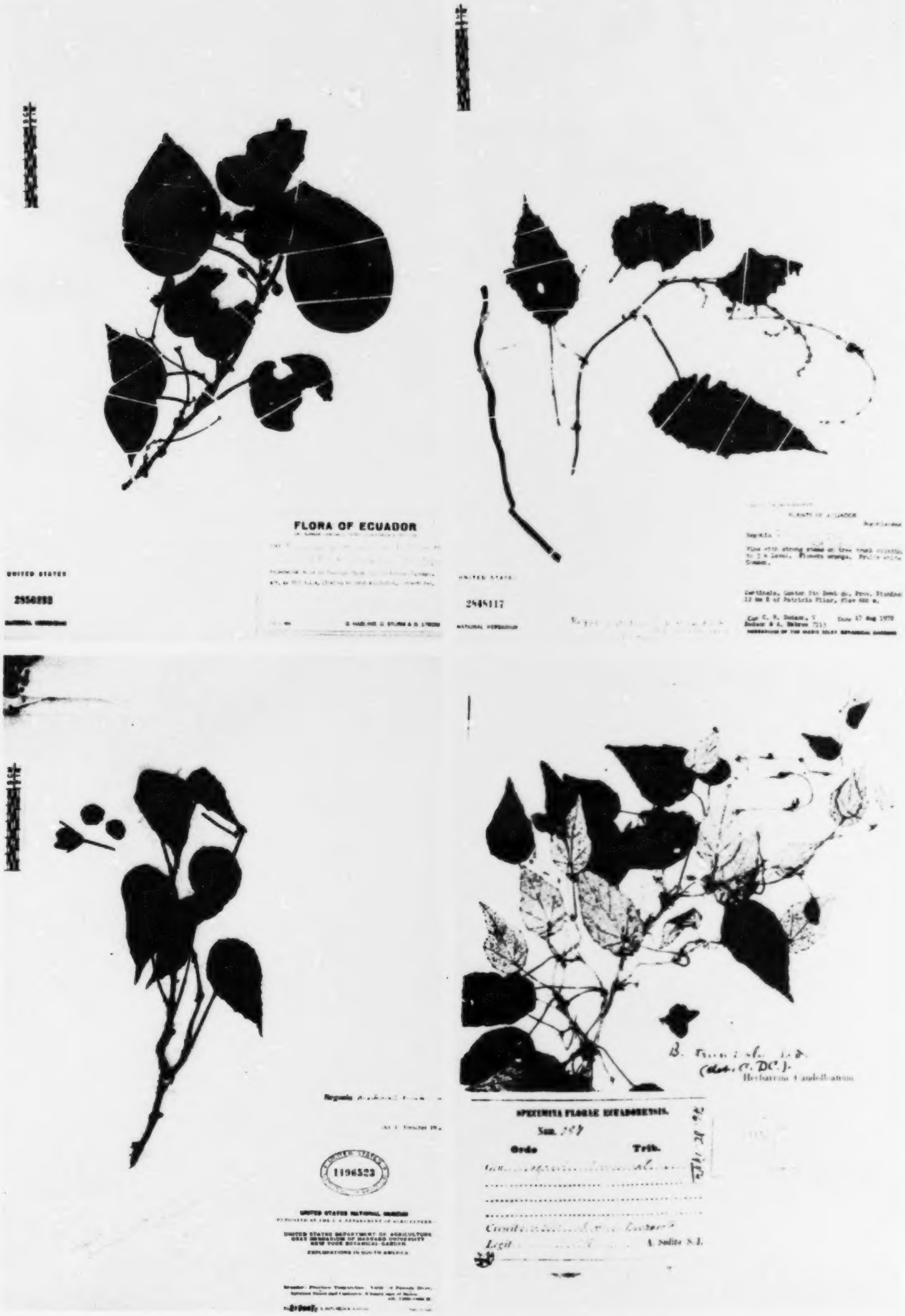

1
2
3
4
5
6
7
8
9
10
11
12
13
14
1cm
N.Hallé


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
1cm
N.Hallé

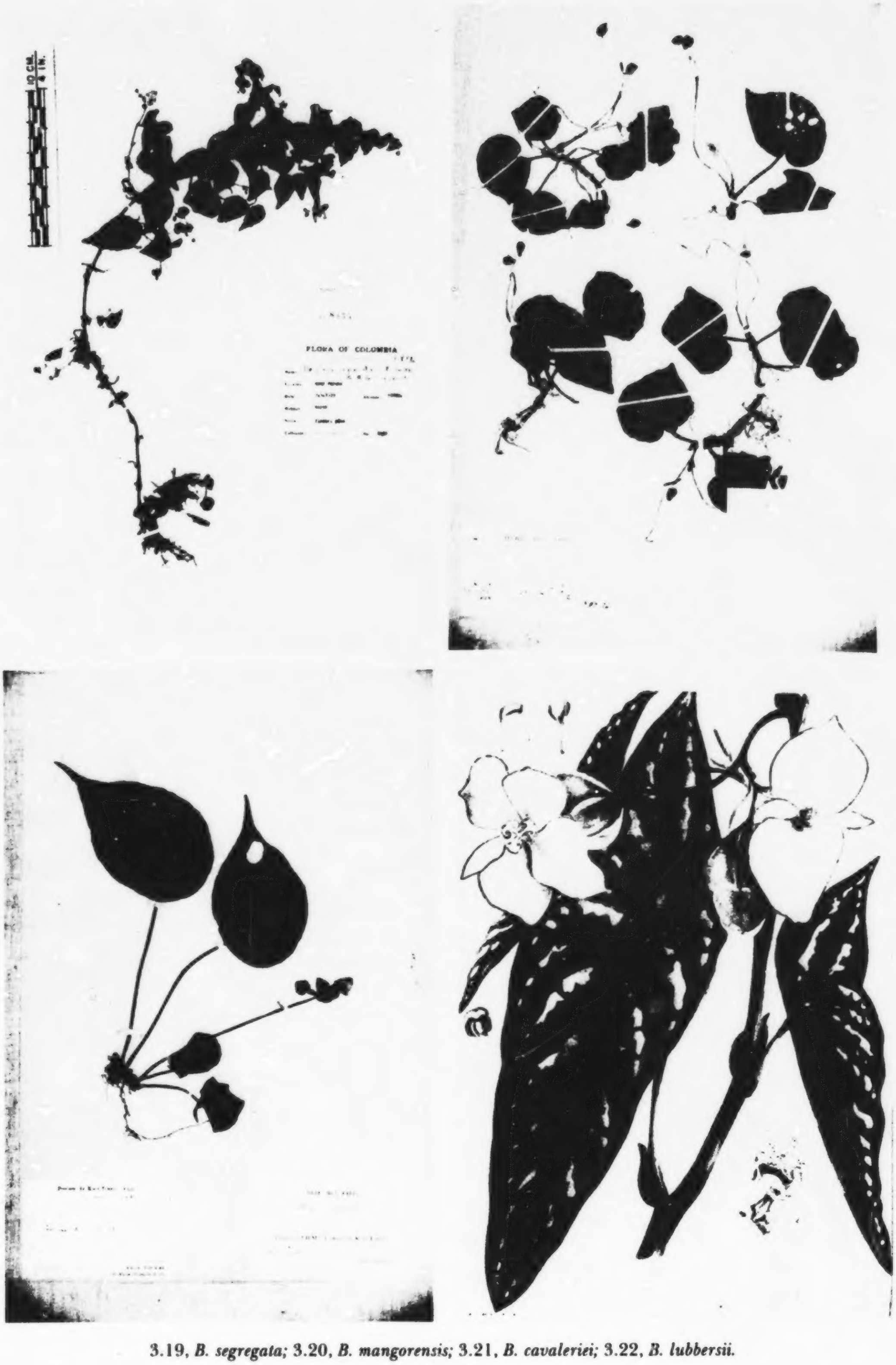
3.7, *B. schultzei;* 3.8, *B. gilgii;* 3.9, *B. ferramica;* 3.10, *B. triflora.*


2541978
2612674
B. Maurandiae
× 1
× 1
× 5
× 5
× 1
× 1

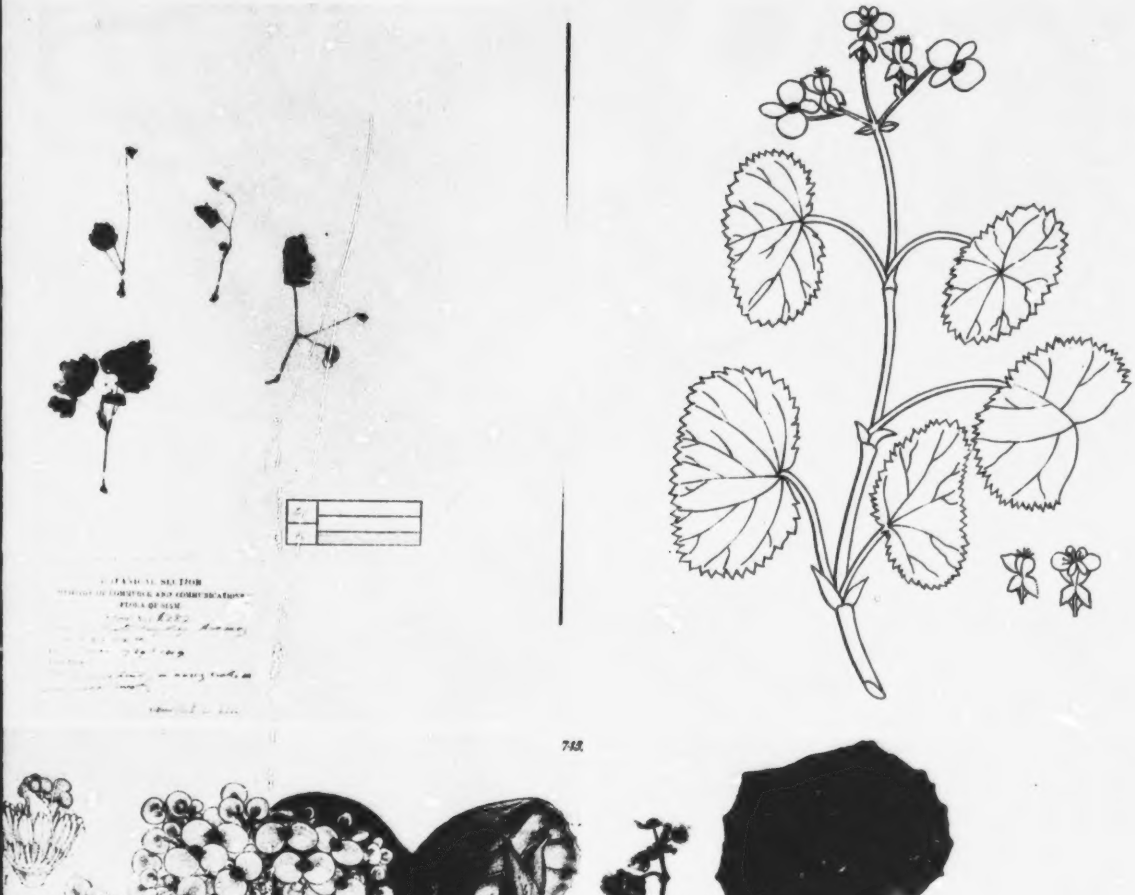
3.11, *B. batesii;* 3.12, *B. francisiae;* 3.13, *B. socotrana;* 3.14, *B. maurandiae.*


FLORA OF ECUADOR
UNITED STATES
2950898
UNITED STATES
2848117
1196523
SPECIMINA FLORAE ECUADORENSIS
Herbarium Candolleanum

3.15, *B. geminiflora;* 3.16, *B. dodsonii;* 3.17, *B. hitchcockii;* 3.18, *B. truncicola.*

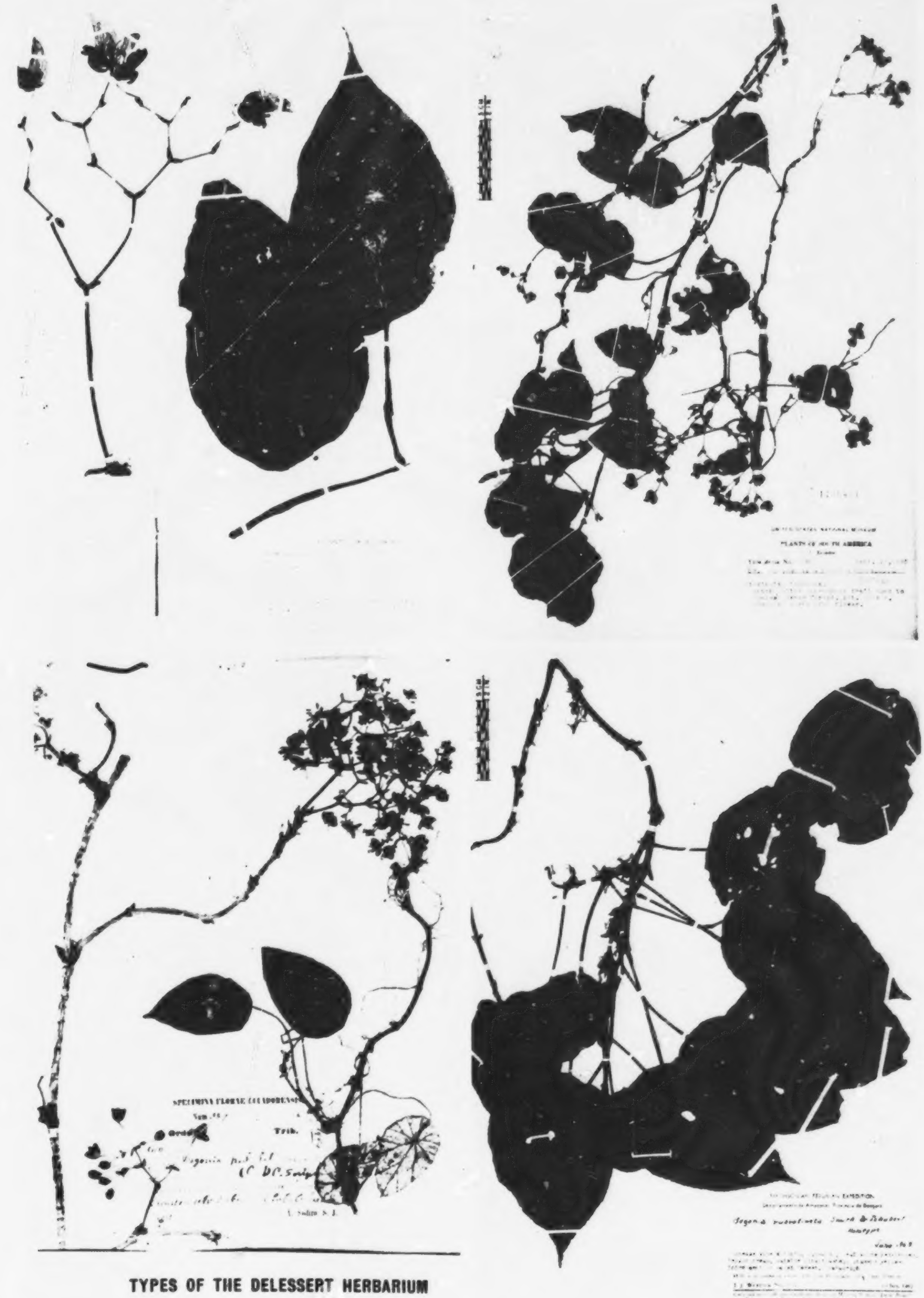

10 CM.
4 IN.
FLORA OF COLOMBIA

3.19, *B. segregata;* 3.20, *B. mangorensis;* 3.21, *B. cavaleriei;* 3.22, *B. lubbersii.*


BOTANICAL SECTION
MINISTRY OF COMMERCE AND COMMUNICATIONS
FLORA OF SIAM
743.
10 CM.
4 IN.
A
B
C
D

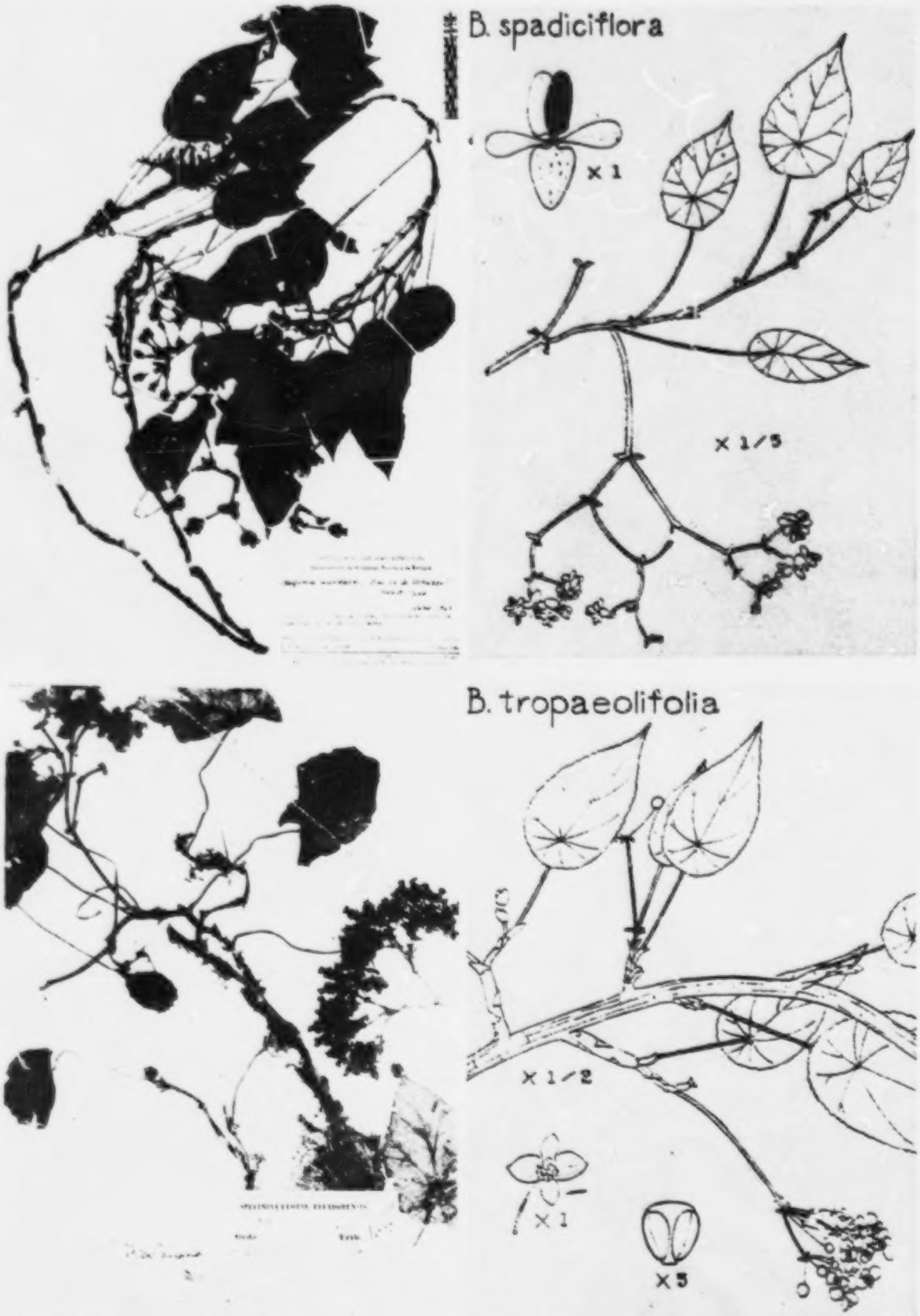
3.23, *B. pumila;* 3.24, *B. fabulosa;* 3.25, *B. umbraculifera;* 3.26, *B. machrisiana.*

BEST COPY AVAILABLE

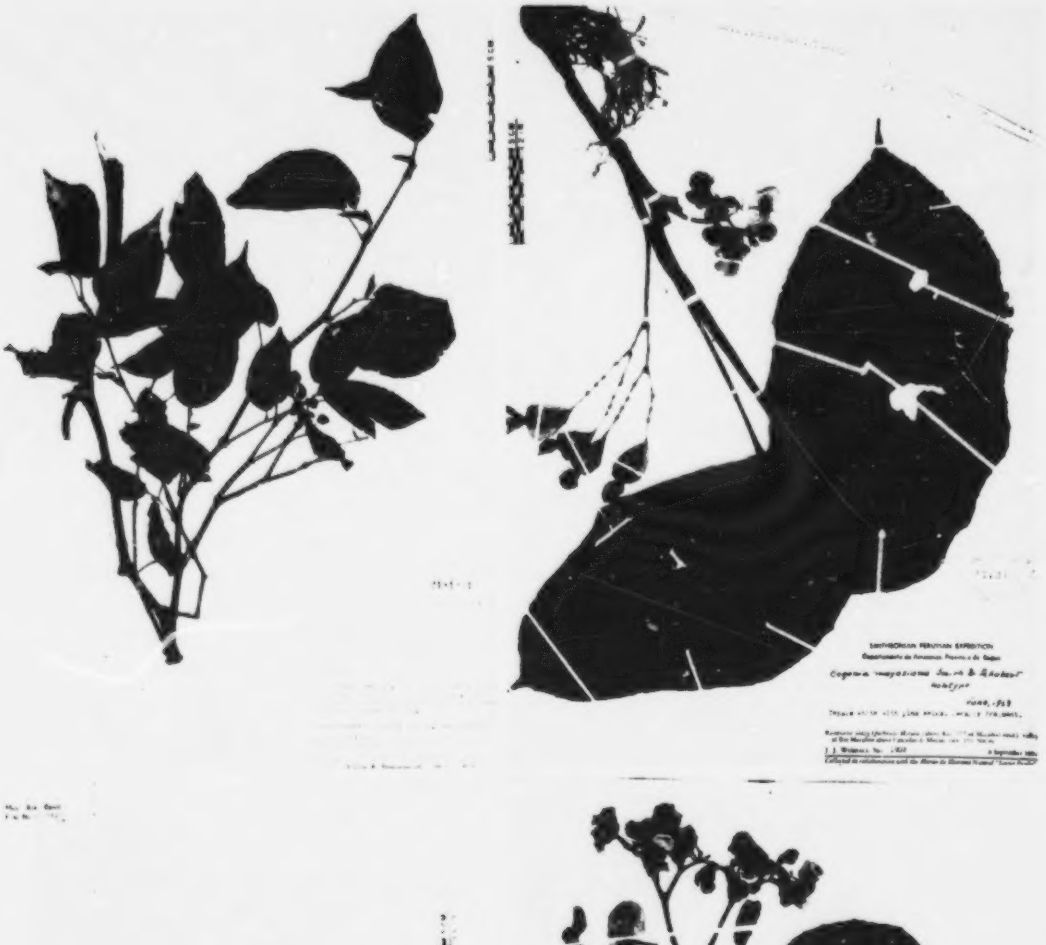

UNITED STATES NATIONAL MUSEUM
PLANTS OF SOUTH AMERICA
SPECIMINA FLORAE ECUADORENSIS

TYPES OF THE DELESSERT HERBARIUM

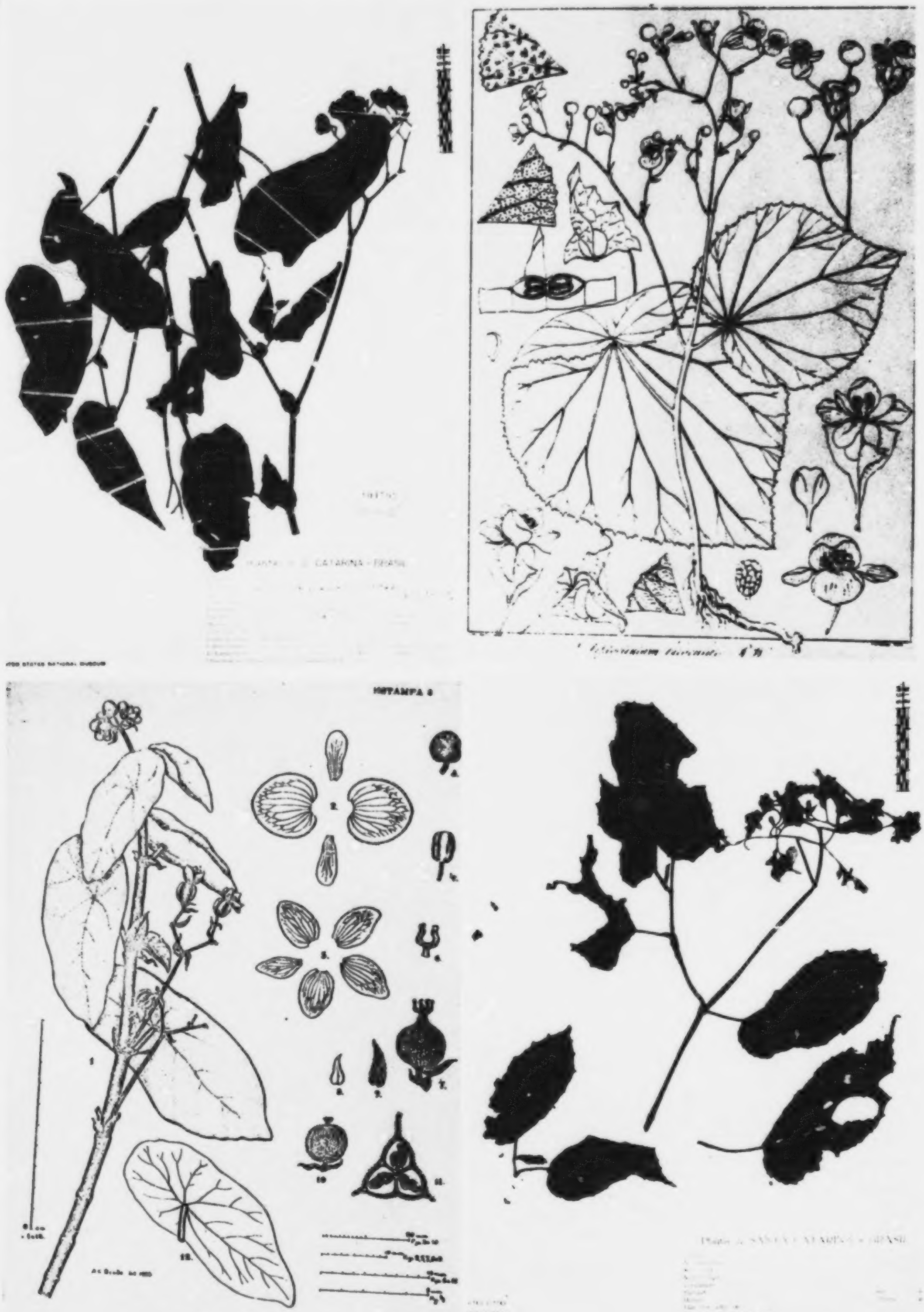
3.27, *B. aeranthos;* 3.28, *B. ynesiae;* 3.29, *B. pululahuana;* 3.30, *B. rubrotincta.*


B. spadiciflora
× 1
× 1/5
B. tropaeolifolia
× 1/2
× 1
× 5
UNITED STATES NATIONAL MUSEUM

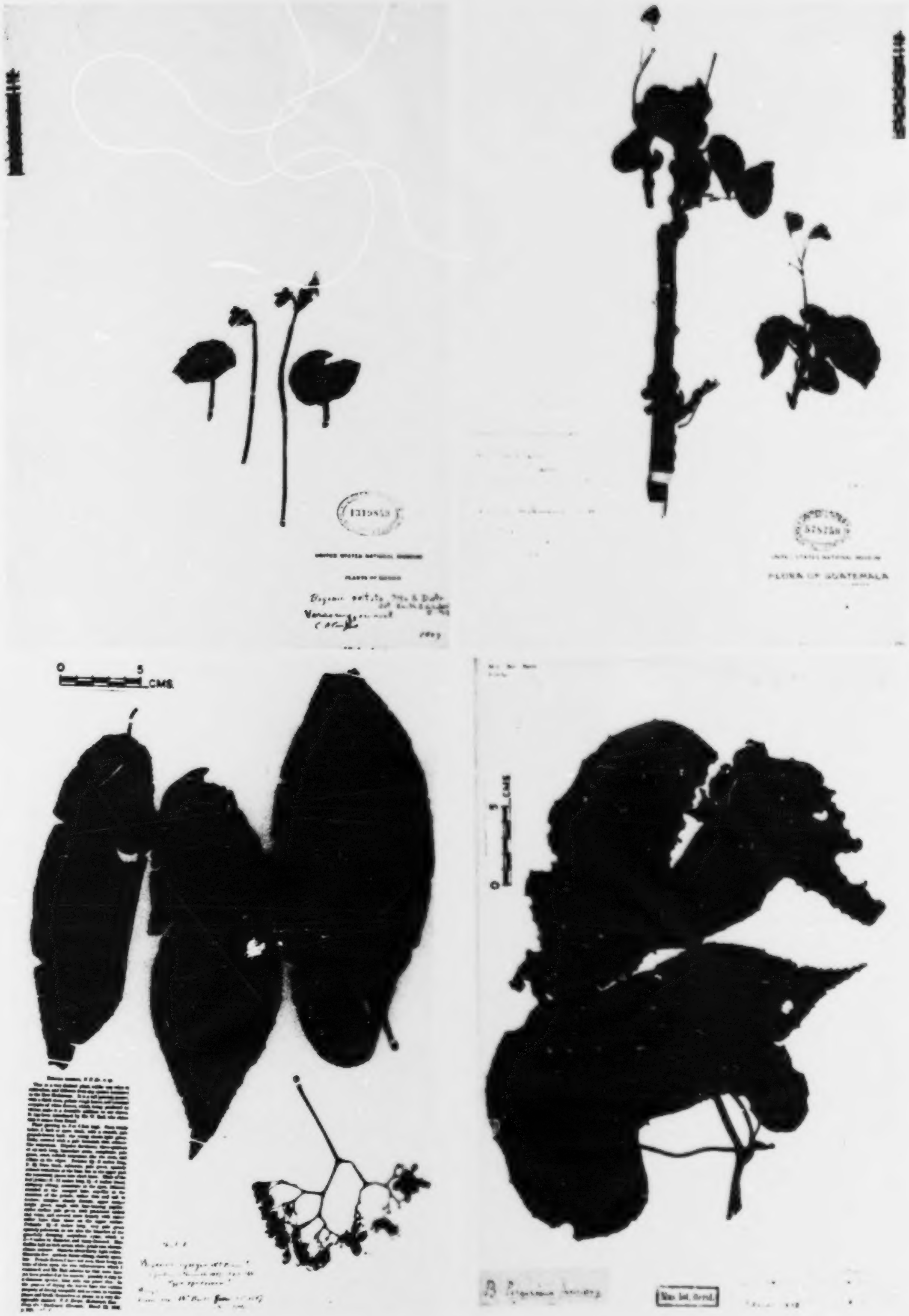
3.31, *B. wurdackii*; 3.32, *B. spadiciflora*; 3.33, *B. sodiroi*; 3.34, *B. tropaeolifolia*.


SMITHSONIAN PERUVIAN EXPEDITION
UNITED STATES NATIONAL MUSEUM
Mus. bot. Berol.
H.S.

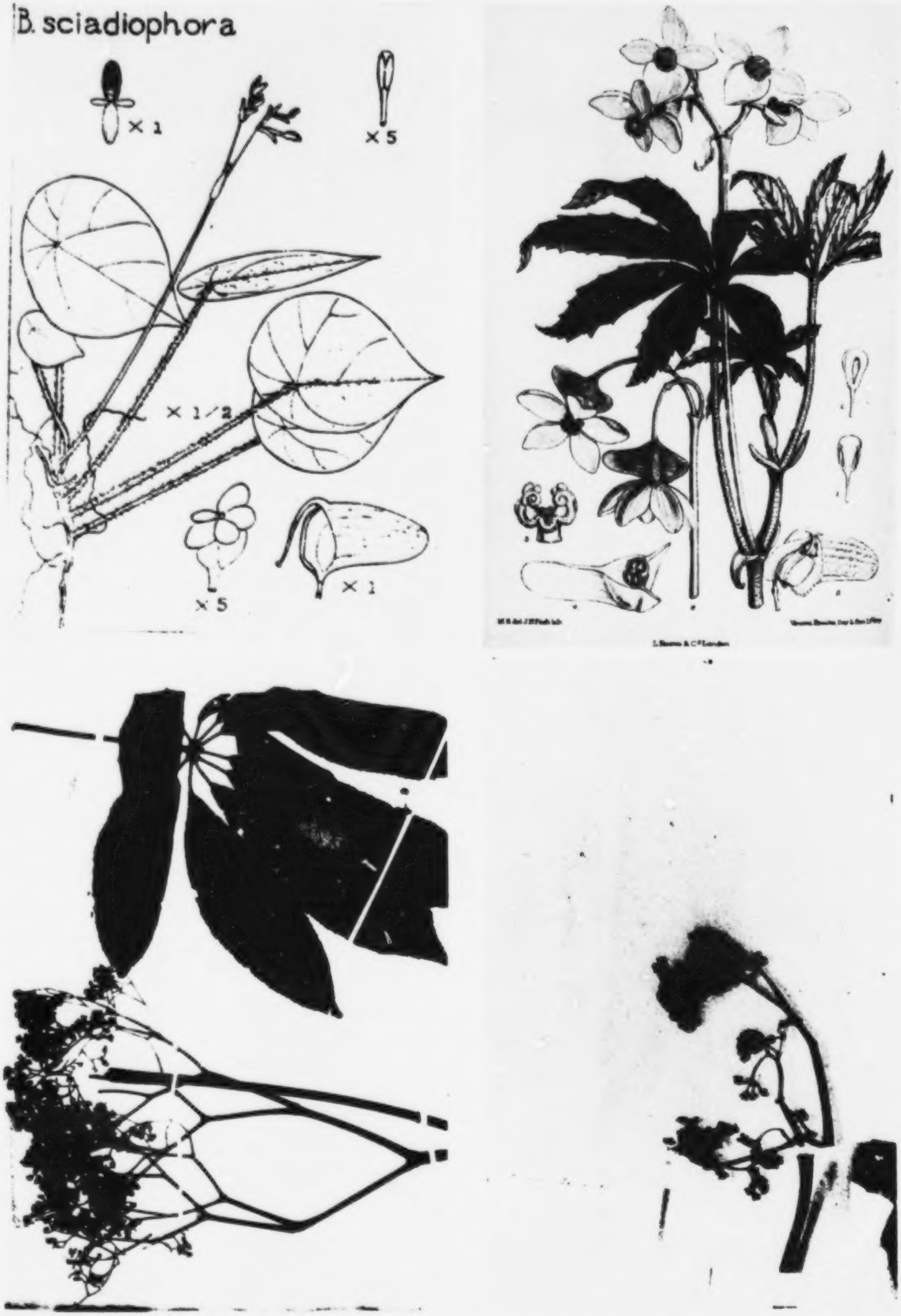
3.35, *B. trujillensis;* 3.36, *B. mayasiana;* 3.37, *B. pruinata;* 3.38, *B. boucheana.*


ESTAMPA 6
Begonia lealii Brade n. sp.
2549833

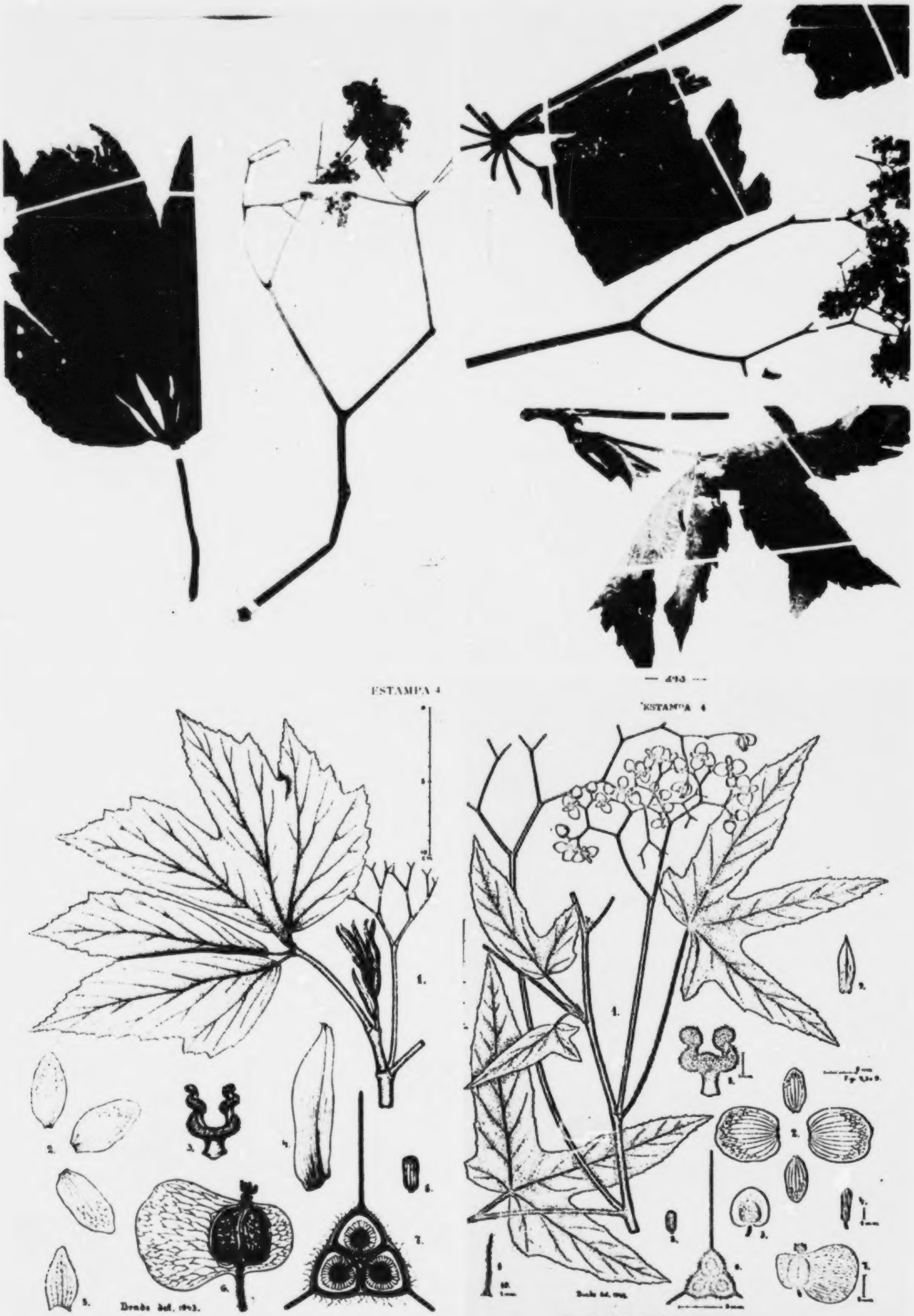
3.39, *B. biguassuensis;* 3.40, *B. sinuata;* 3.41, *B. lealii;* 3.42, *B. campos-portoana.*


UNITED STATES NATIONAL MUSEUM
PLANTS OF MEXICO
UNITED STATES NATIONAL MUSEUM
FLORA OF GUATEMALA
0 5 CMS
0 5 CMS

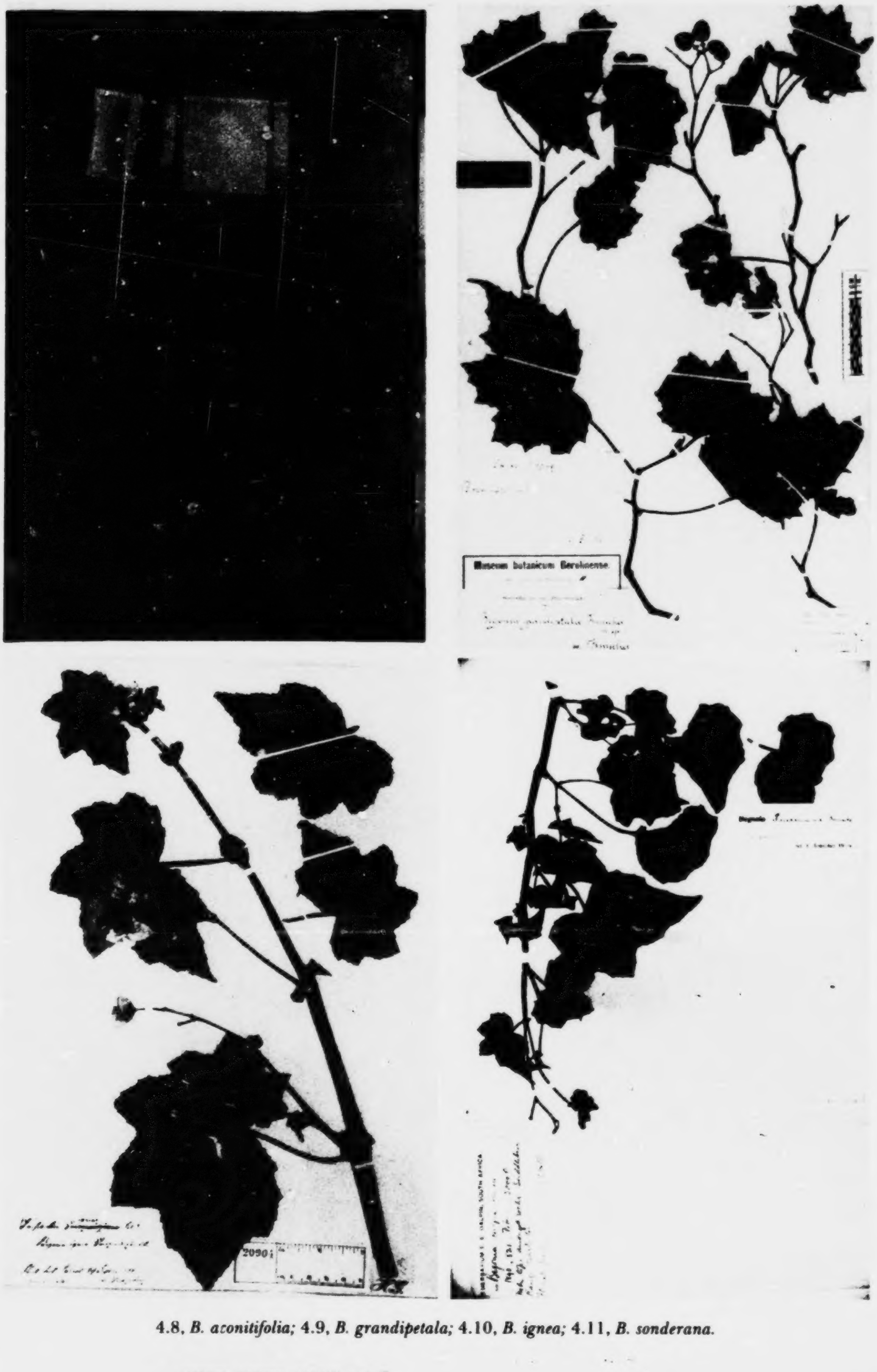
3.43, *B. peltata;* 3.44, *B. kellermanii;* 3.45, *B. egregia;* 3.46, *B. pilgerana.*


B. sciadiophora
× 1
× 5
× 1/2
× 5
× 1

3.47, *B. sciadiophora;* 4.1, *B. hemsleyana;* 4.2, *B. pentaphylla;* 4.3, *B. luxurians.*

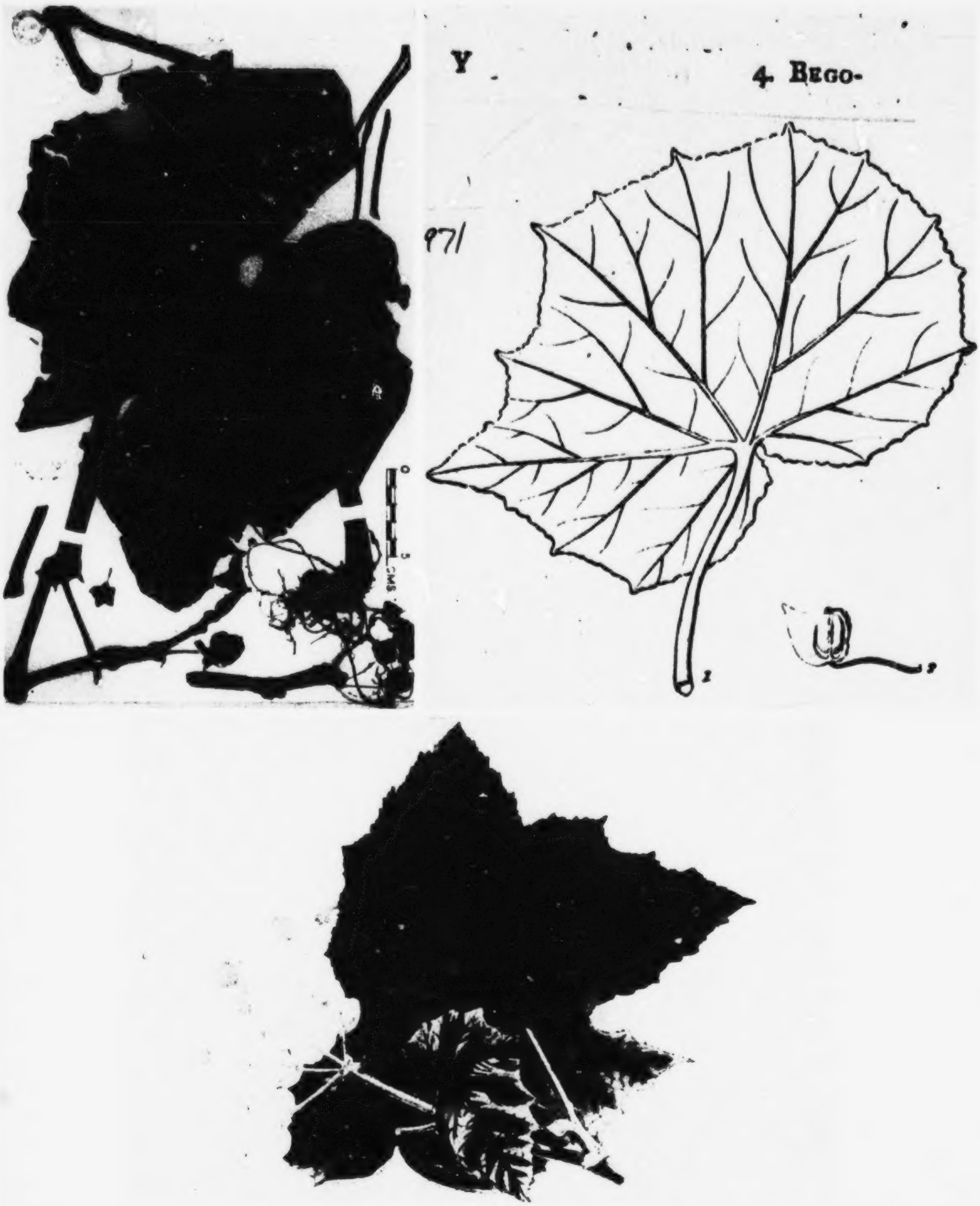

— 243 —
ESTAMPA 4
ESTAMPA 4
Brade del. 1943.
Begonia semidigitata Brade n. sp. (Brade del.)
Begonia (Pritzelia) Altamiroi Brade n. sp.

4.4, *B. digitata;* 4.5, *B. incisoserrata;* 4.6, *B. semidigitata;* 4.7, *B. altamiroi.*

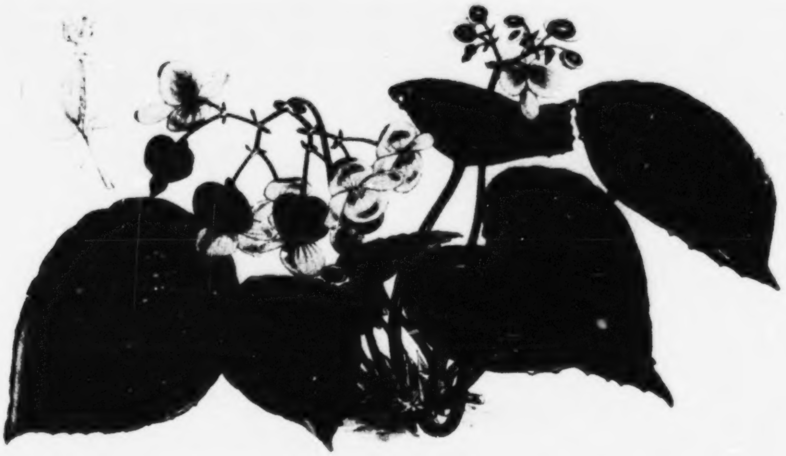

Museum botanicum Berolinense
2090

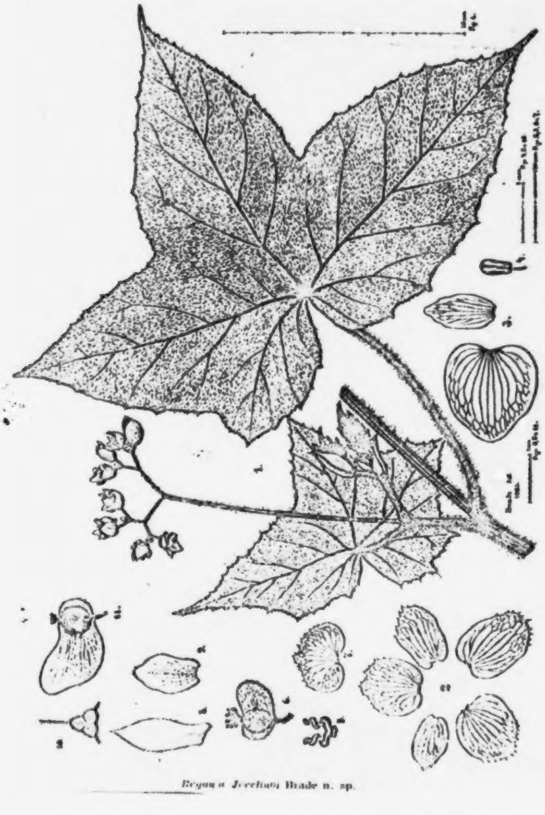
4.8, *B. aconitifolia;* 4.9, *B. grandipetala;* 4.10, *B. ignea;* 4.11, *B. sonderana.*

4.12, *B. kortsiae;* 4.13, *B. triramosa;* 4.14, *B. octopetala;* 4.15, *B. lobata.*

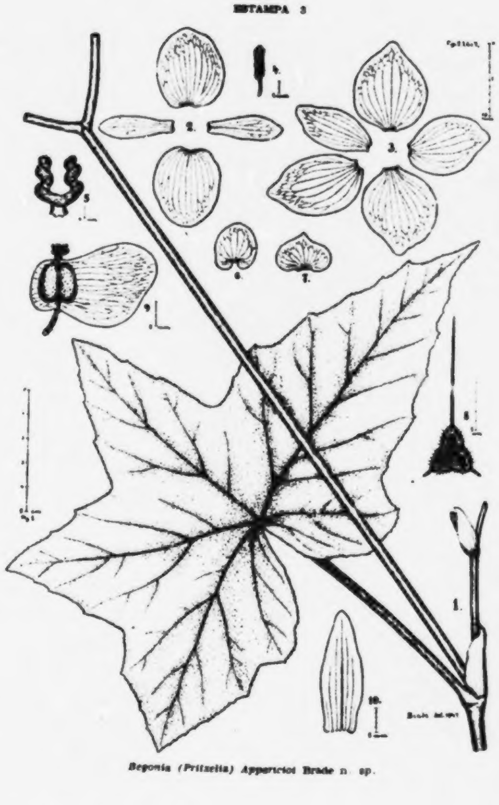

Y
4. Bego-
971
0
5
CMS
1
2

4.16, *B. multangula;* 4.17, *B. reniformis;* 4.18, *B. metallica.*



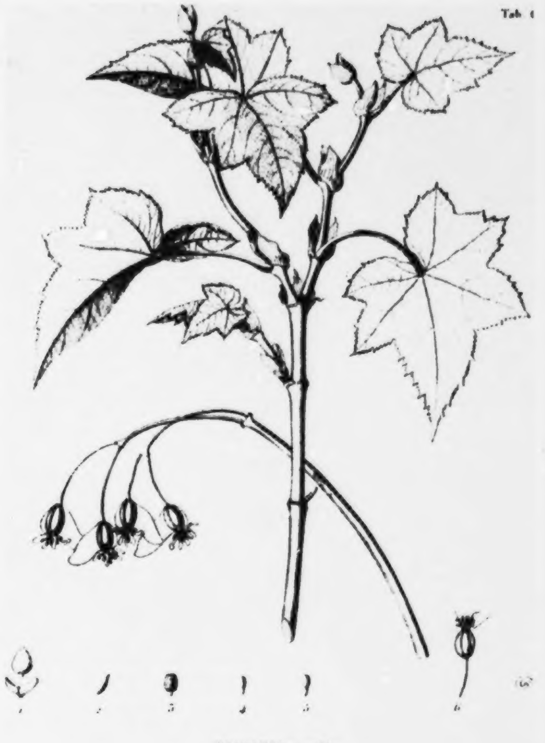


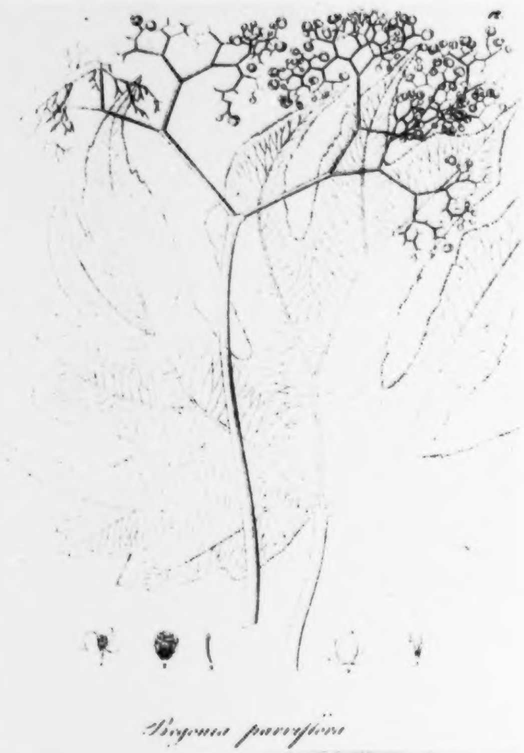
Begonia Jocelinoi Brade n. sp.



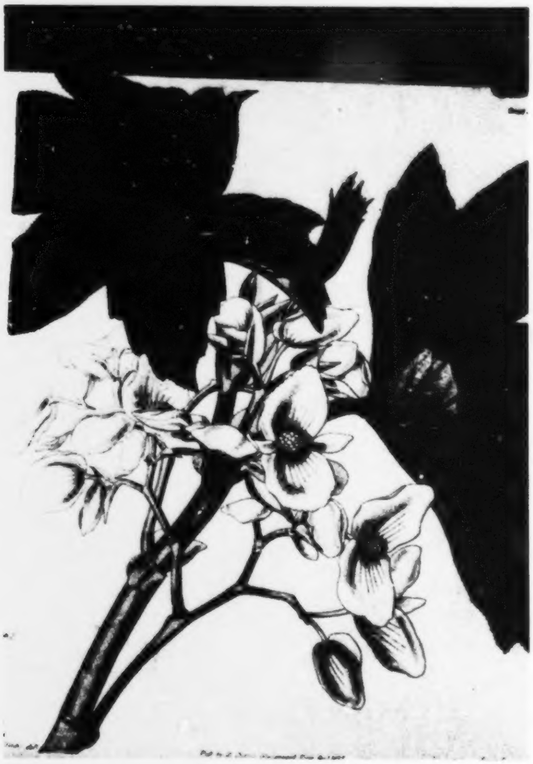
ESTAMPA 3
Begonia (Pritzelia) Apparicioi Brade n. sp.

4.19, *B. cariocana;* 4.20, *B. jocelinoi;* 4.21, *B. apparicioi.*

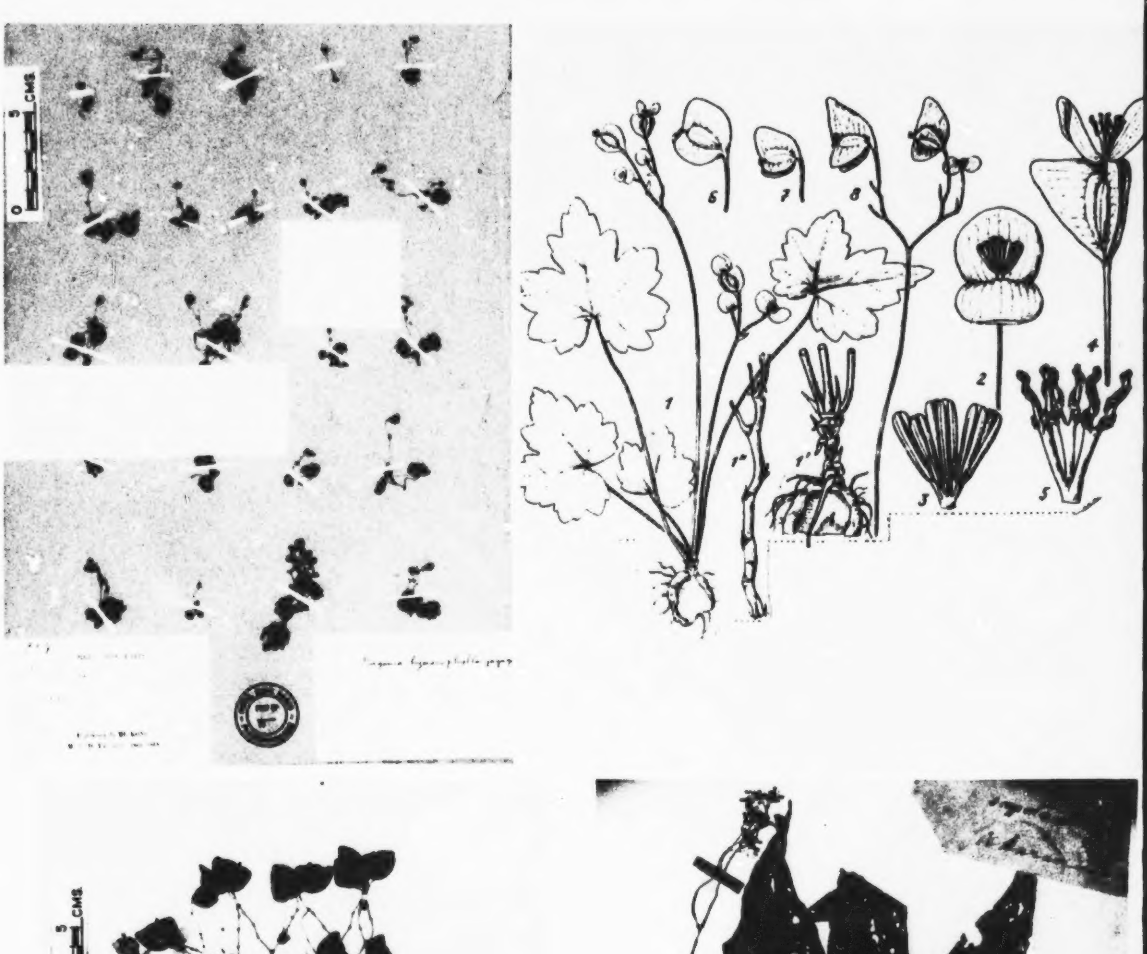

Tab.
1
2
3
4
5
6
BEGONIA acerifolia


Begonia parviflora

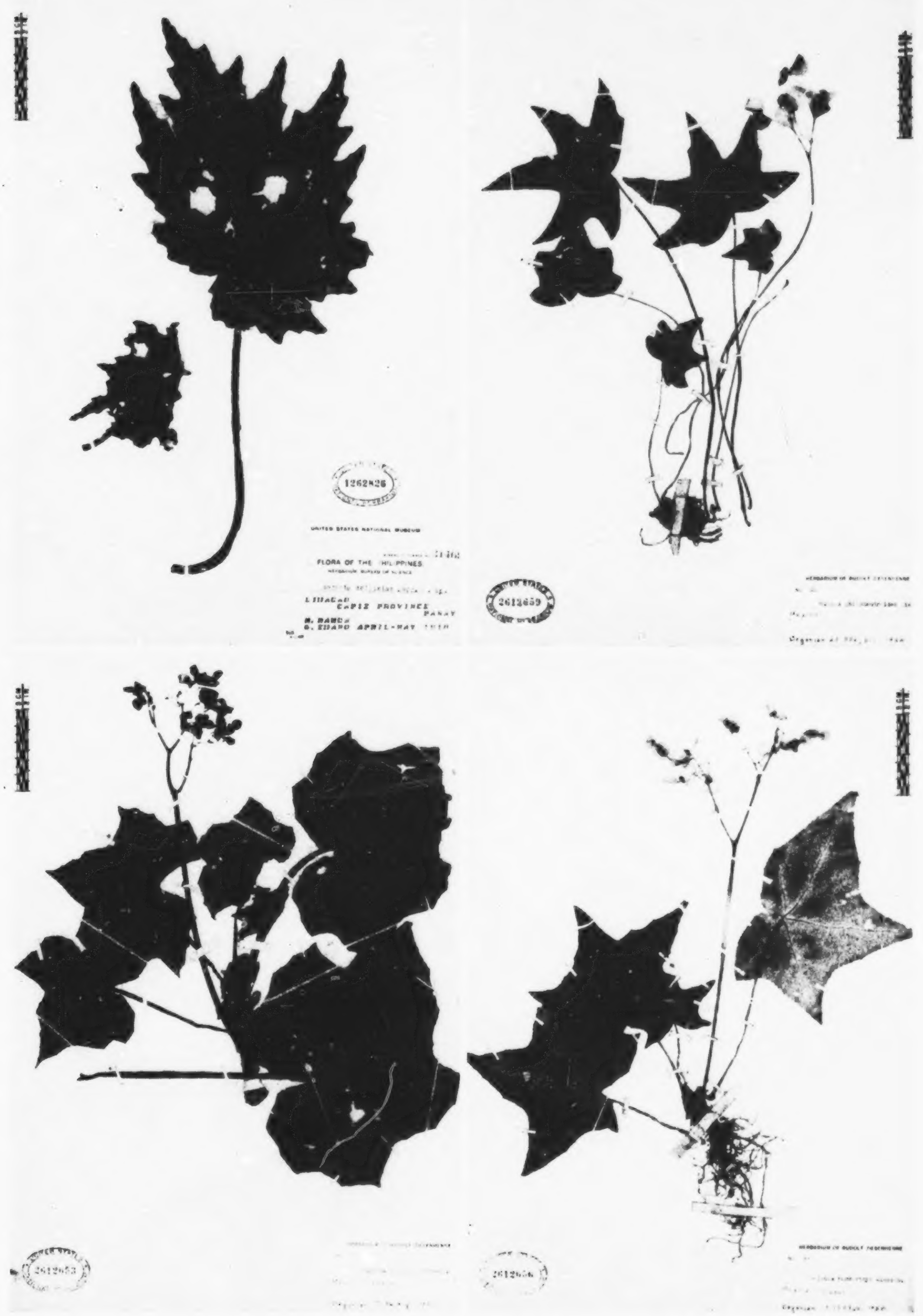
HERBARIUM
UNITED STATES NATIONAL MUSEUM



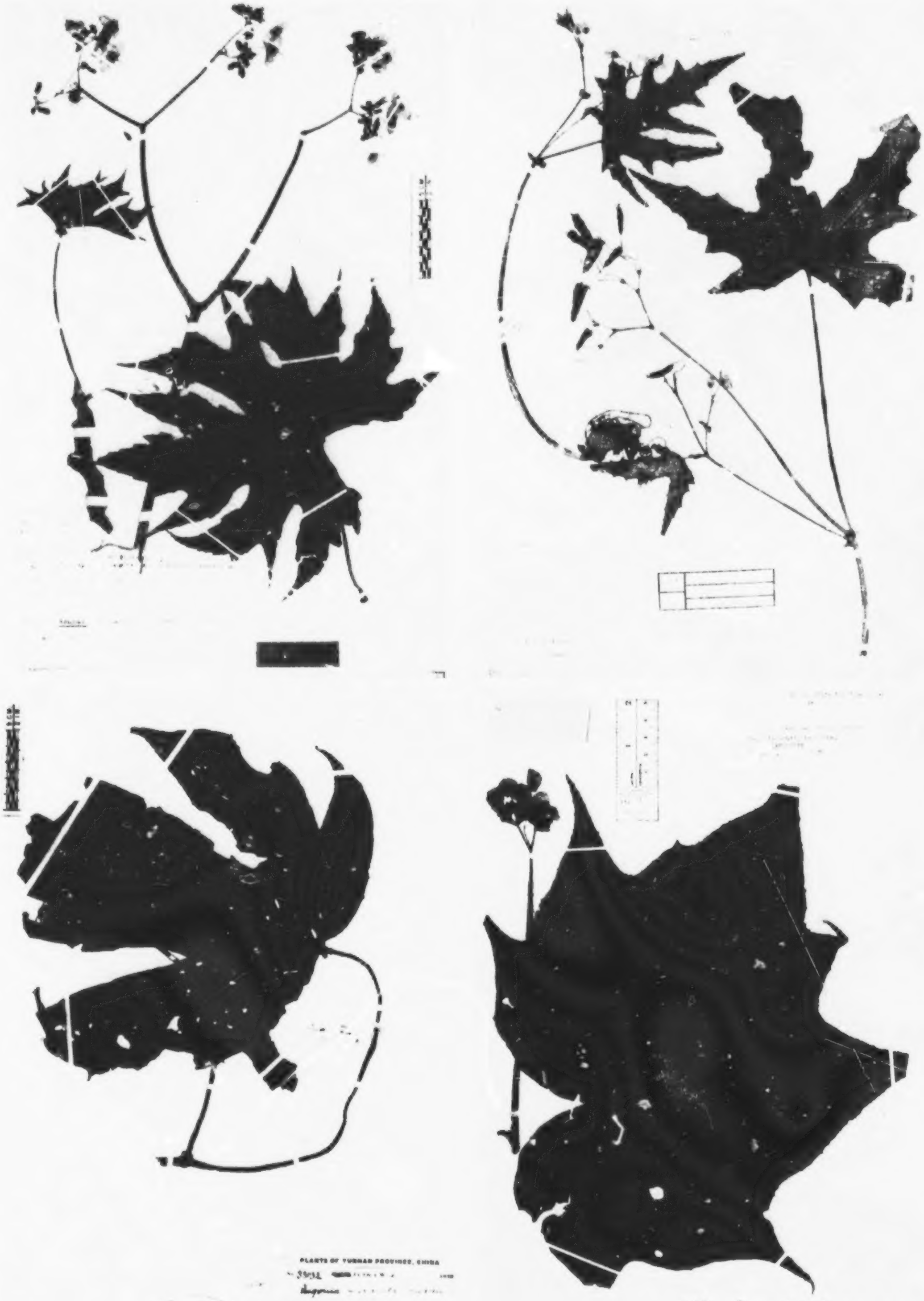
4.22, *B. acerifolia;* 4.23, *B. parviflora;* 4.24, *B. gardneri;* 4.25, *B. platanifolia.*


CMS
0
5
1
2
3
4
5
6
7
8
Herb. D. Brandis
Hab.
Nom. vern.
Coll.

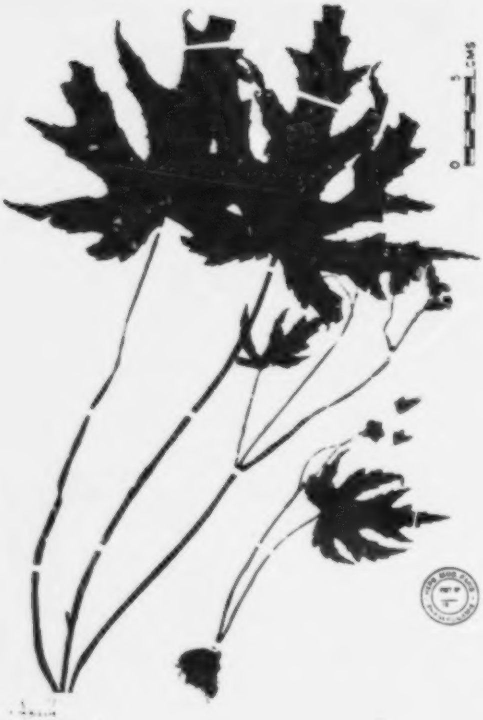
4.26 *B. hymenophylla;* 4.27, *B. bagotiana;* 4.28, *B. mananjebensis;* 4.29, *B. brandisiana.*

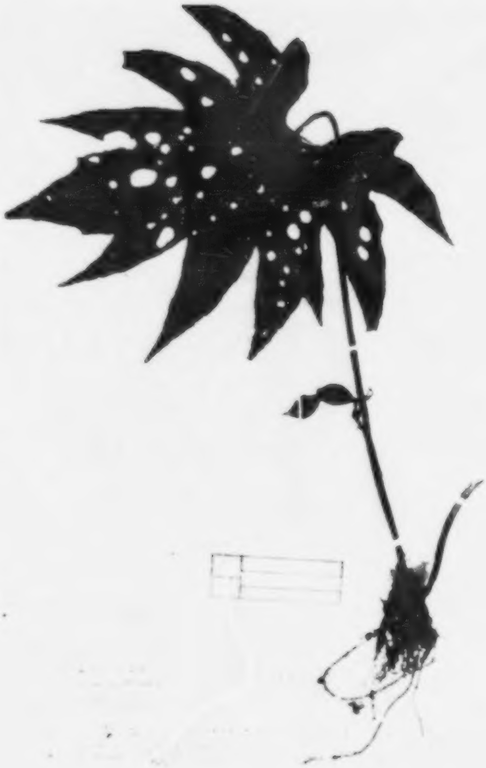

1262826
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
CAPIZ PROVINCE
PANAY
2612659
2612653
2612656

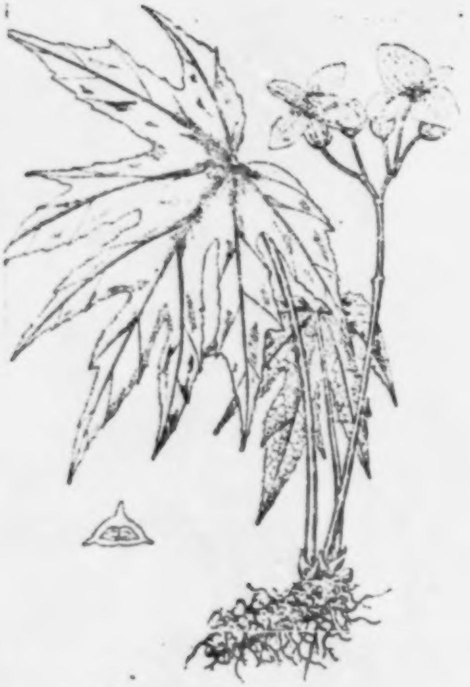
4.30, *B. collisiae;* 4.31, *B. philodendroides;* 4.32, *B. chivatoa;* 4.33, *B. kenworthyae.*

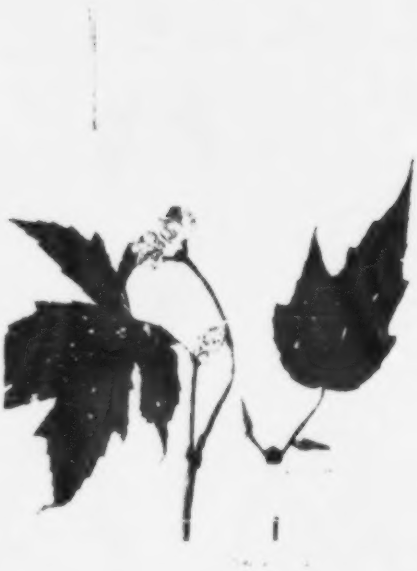

PLANTS OF YUNNAN PROVINCE, CHINA

4.34, *B. ludwigii;* 4.35, *B. garrettii;* 4.36, *B. miranda;* 4.37, *B. acutiloba.*

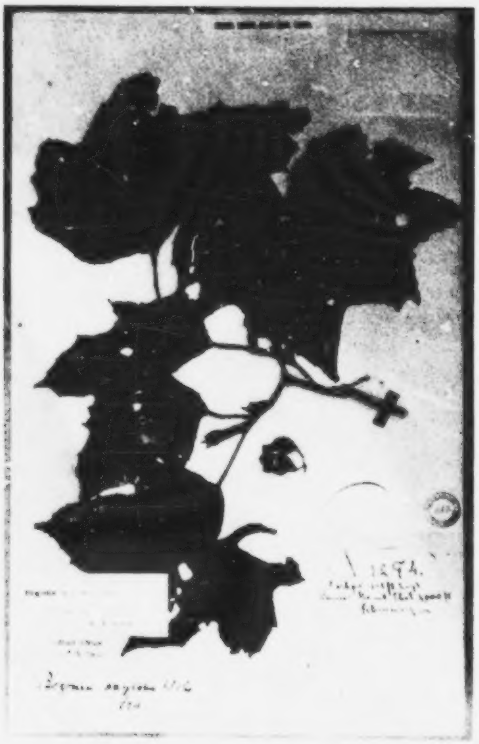


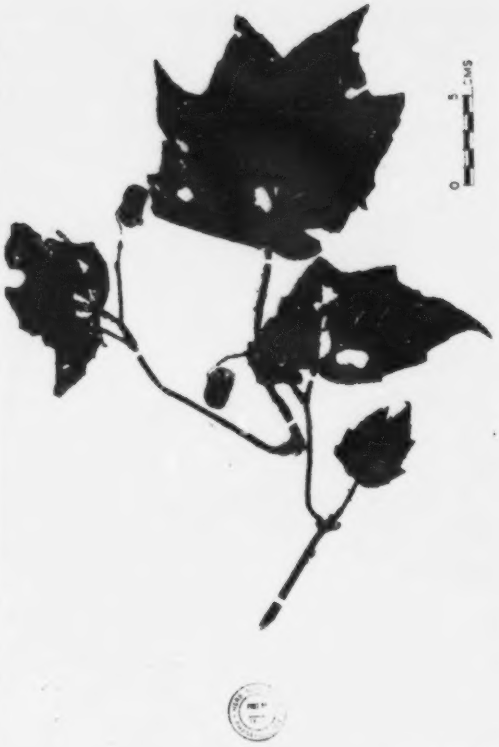


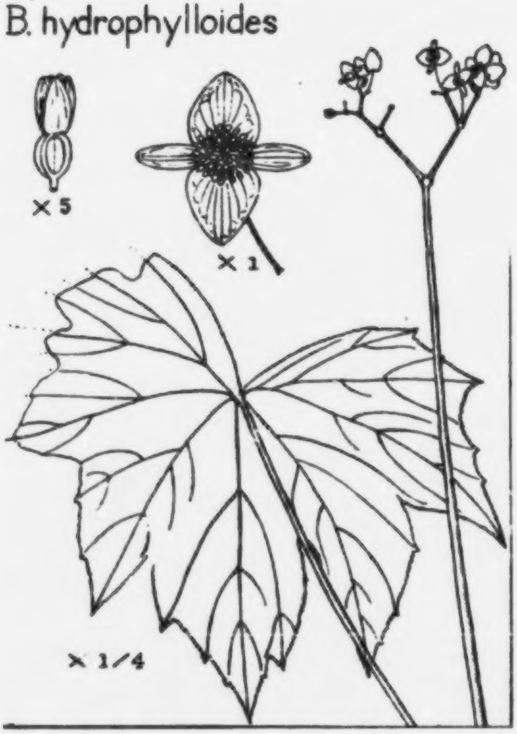




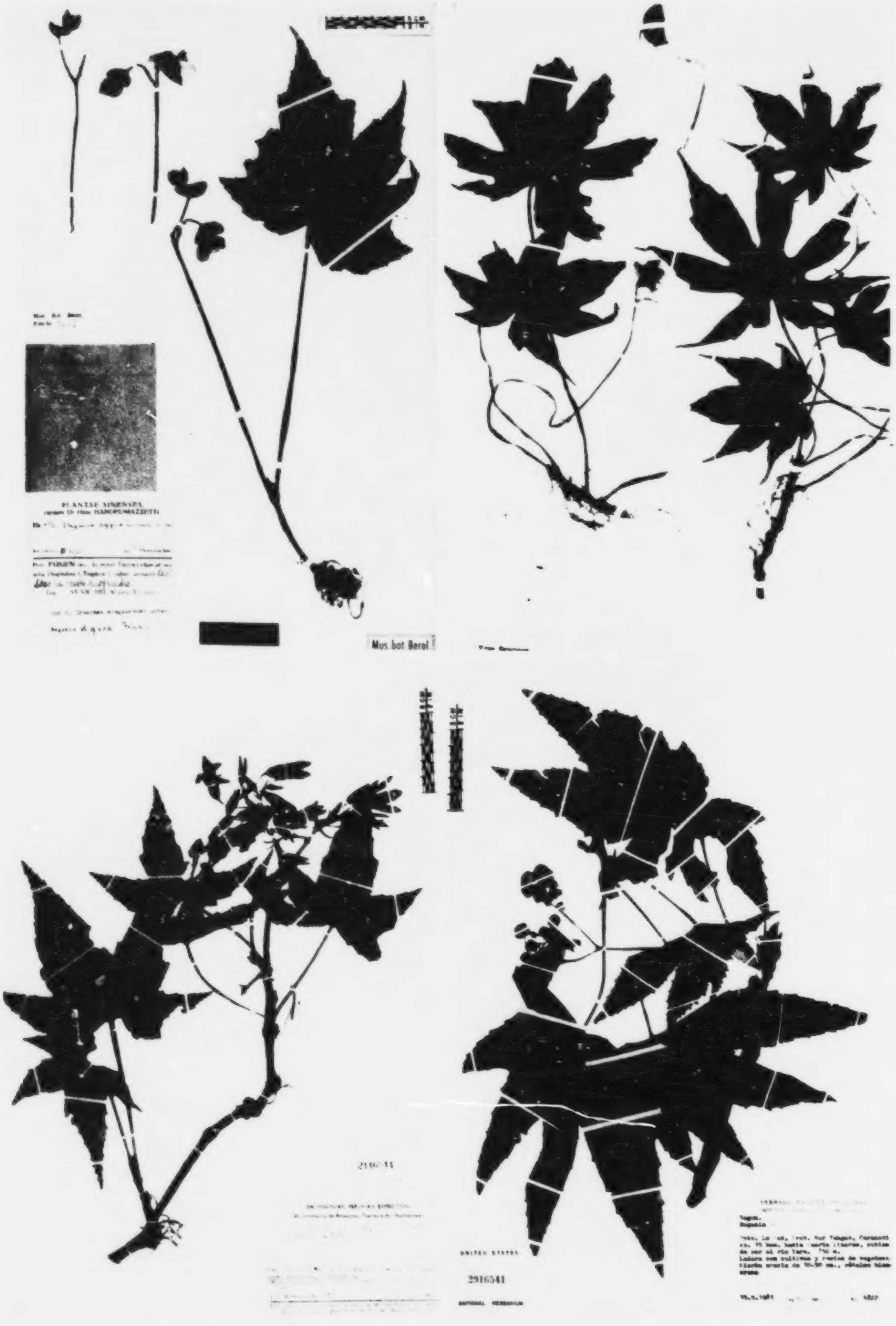
4.38, *B. taliensis;* 4.39, *B. obovoidea;* 4.40, *B. pedatifida;* 4.41, *B. sikkimensis.*



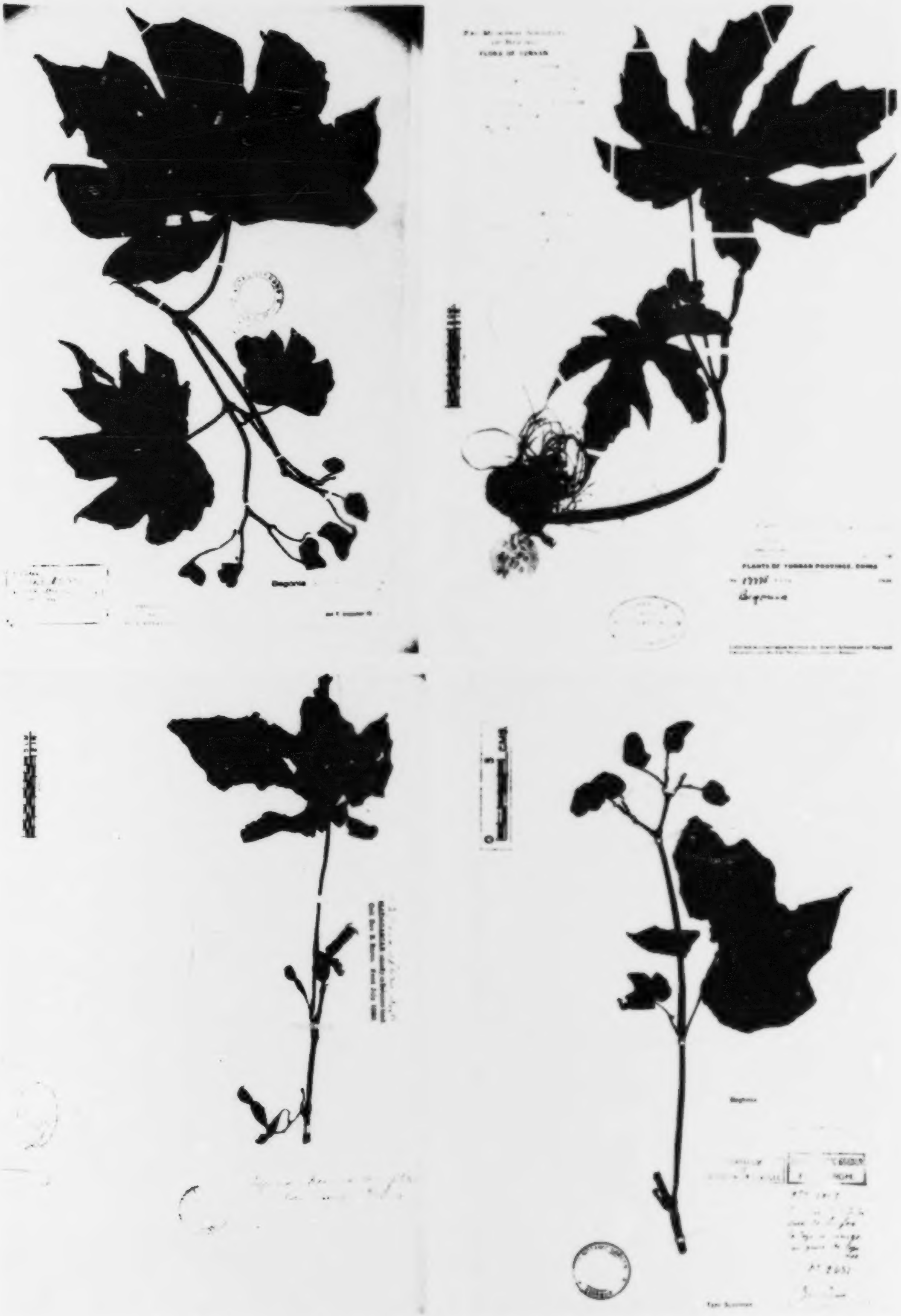



B. hydrophylloides
× 5
× 1
× 1/4

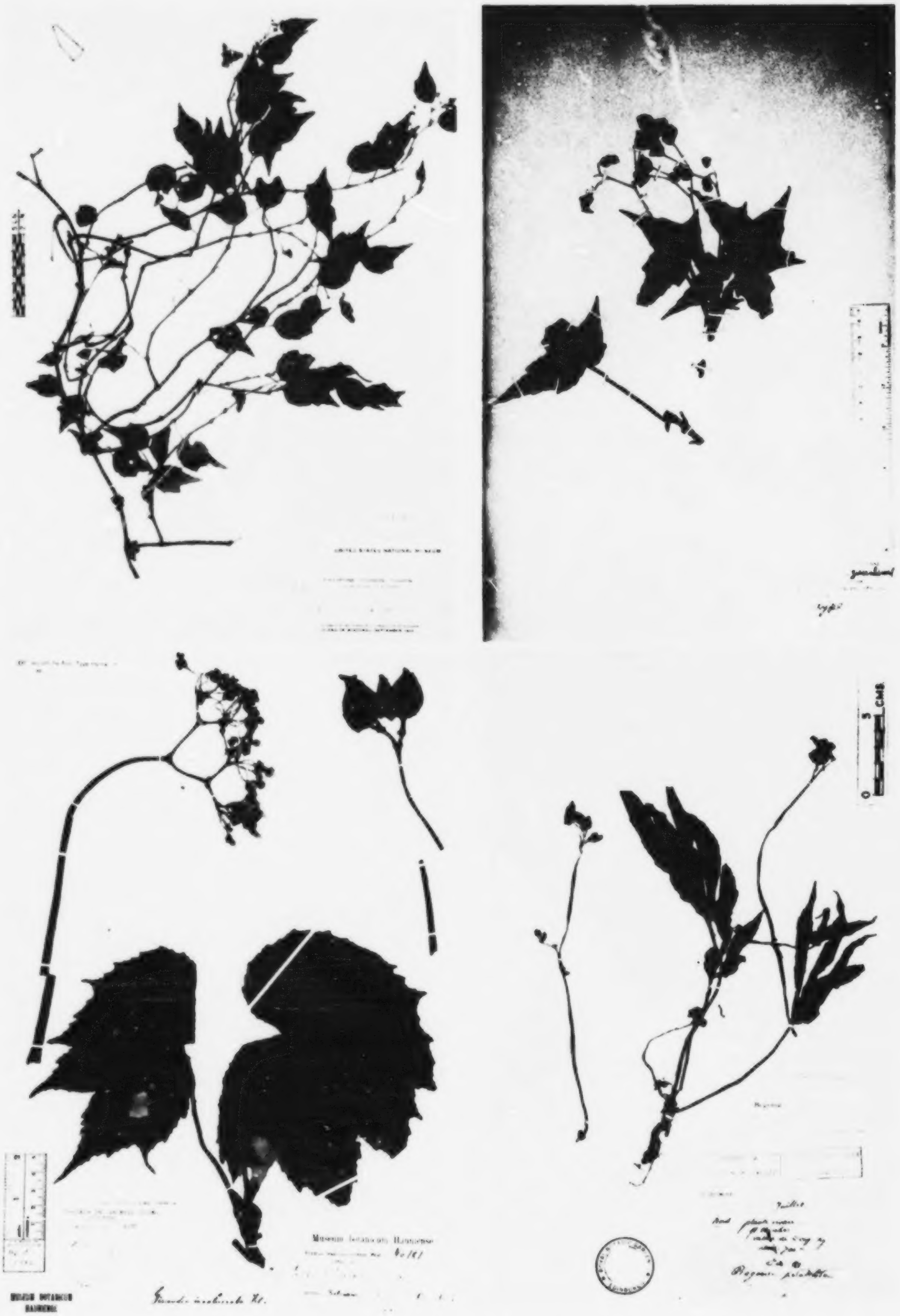
4.42, *B. oxyloba;* 4.43, *B. baviensis;* 4.44, *B. hydrophylloides.*



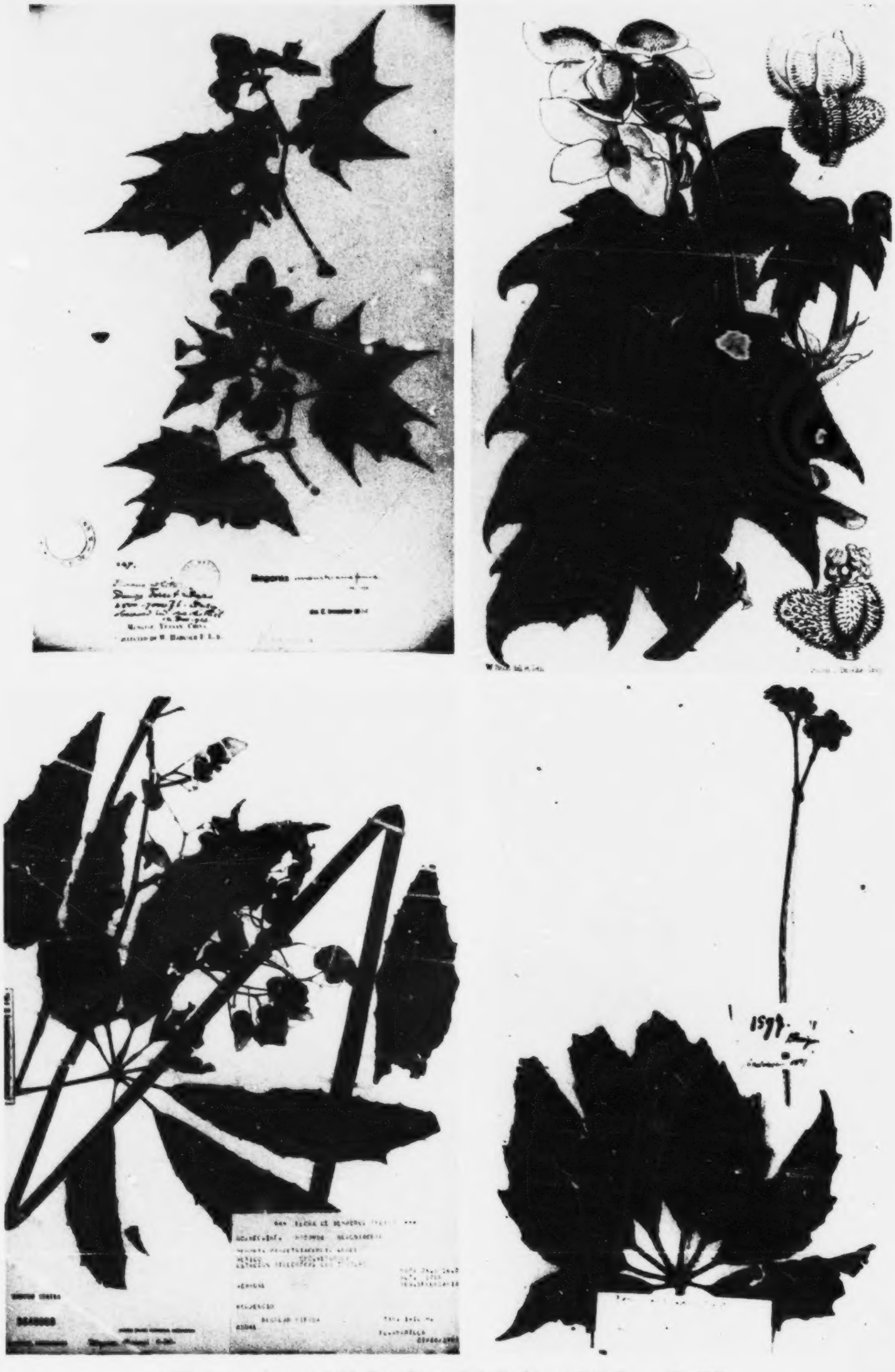
4.45, *B. digyna*; 4.46, *B. circumlobata*; 4.47, *B. monadelpha*; 4.48, *B. wollnyi*.


FLORA OF YUNNAN
Begonia
PLANTS OF YUNNAN PROVINCE, CHINA
Begonia
Begonia

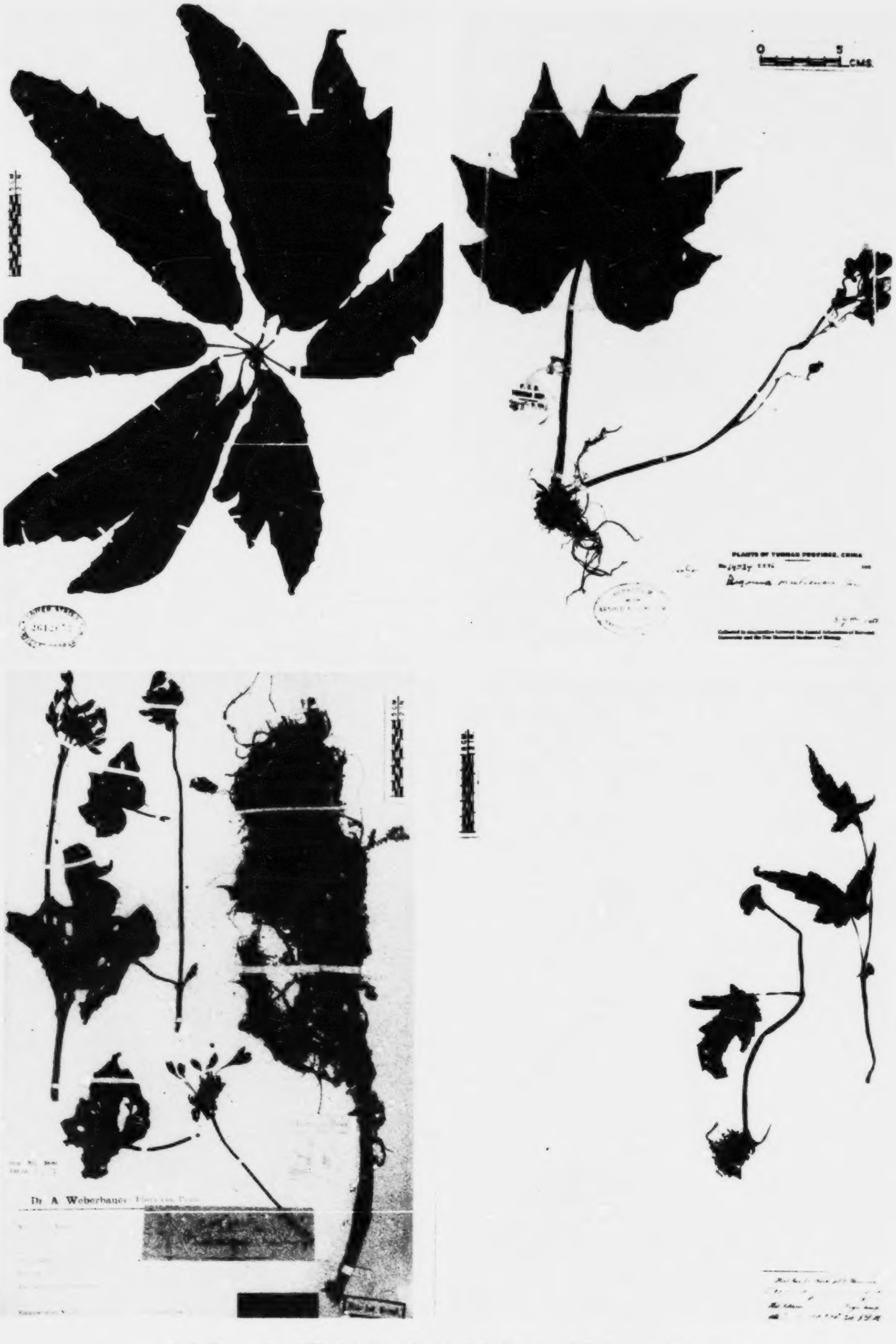
4.49, *B. truncatiloba;* 4.50, *B. macrotoma;* 4.51. *B. cladocarpa;* 4.52, *B. edulis.*


UNITED STATES NATIONAL MUSEUM
CMS
Museum Botanicum Hauniense

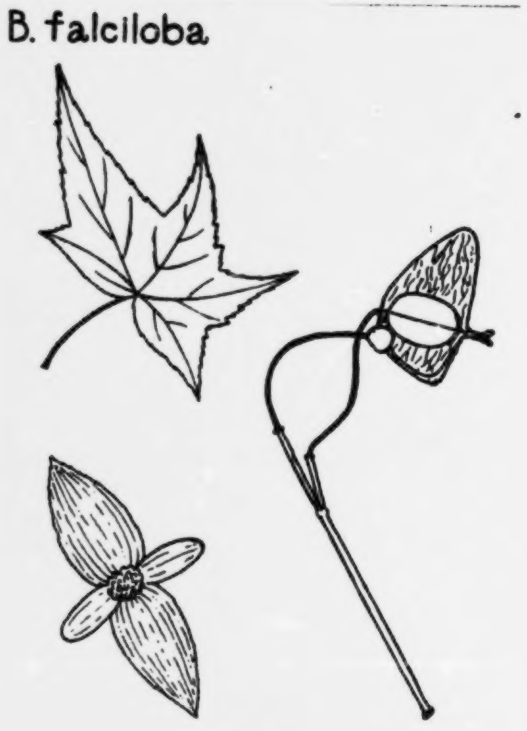
4.53, *B. sarmentosa;* 4.54, *B. bettinae;* 4.55, *B. involucrata;* 4.56, *B. scitifola.*

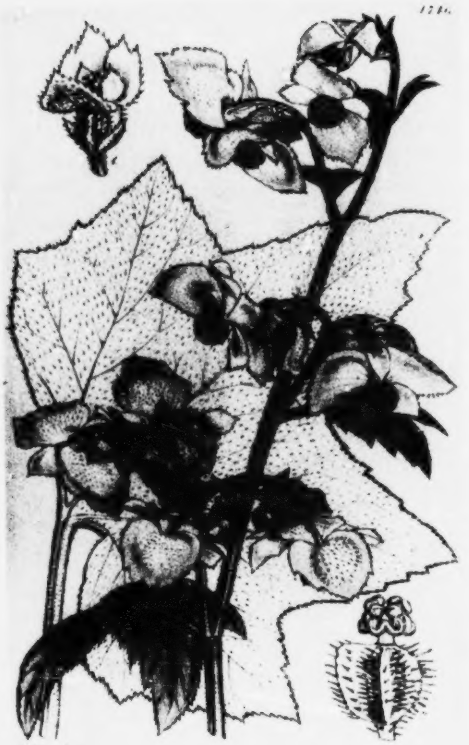


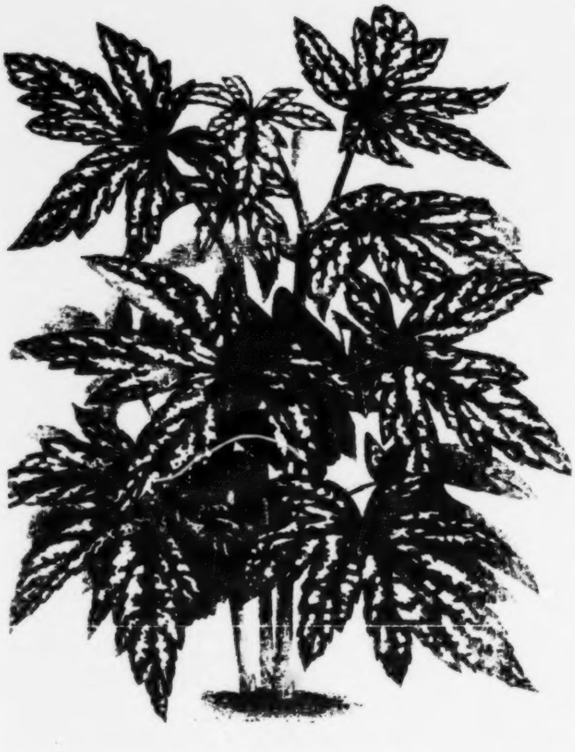
4.57, *B. mengtzeana;* 4.58, *B. palmata;* 5.1, *B. thiemei;* 5.2, *B. carolineifolia.*


0 5 CMS.
PLANTS OF YUNNAN PROVINCE, CHINA
Dr. A. Weberbauer

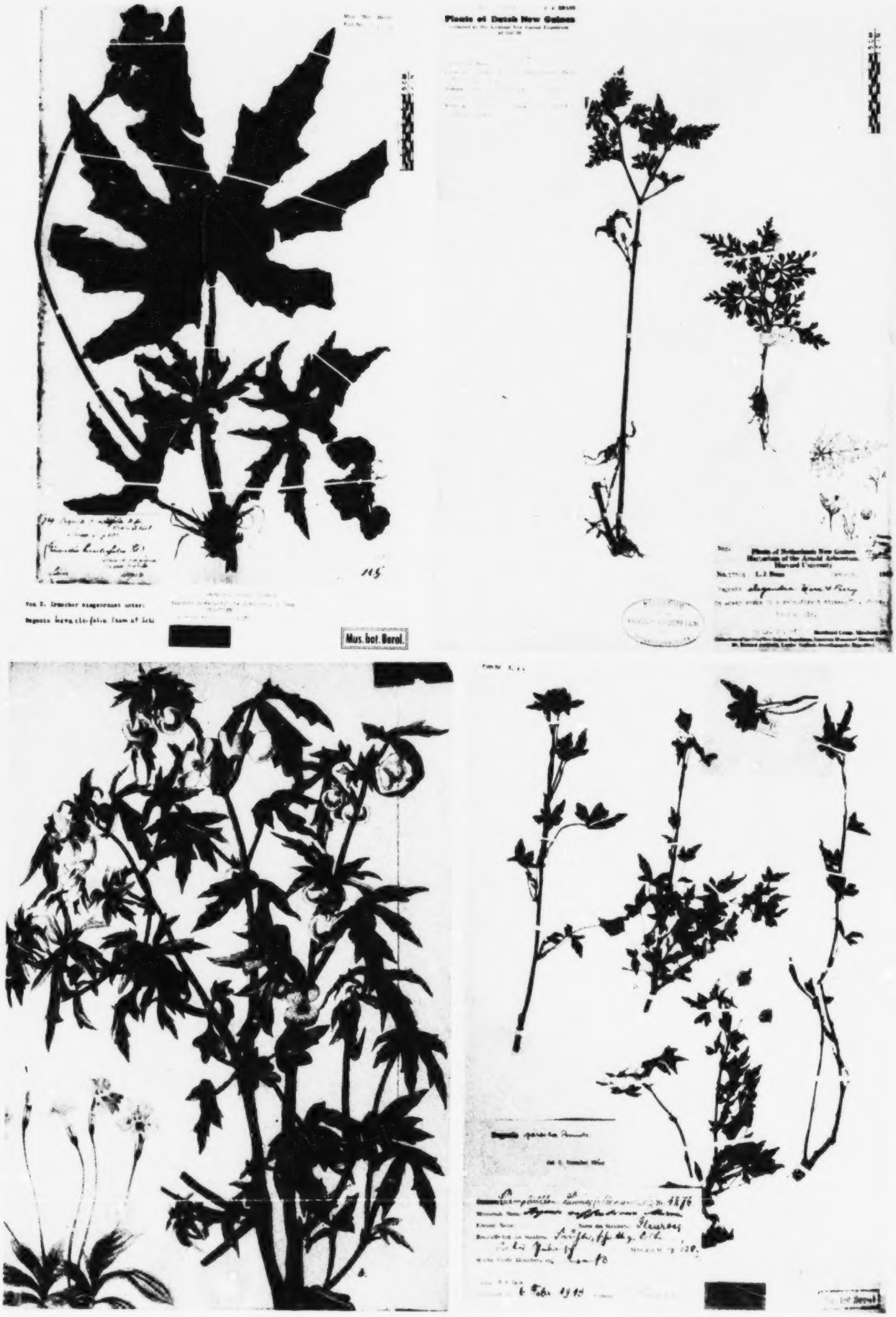
5.3, *B. macdougallii;* 5.4, *B. muliensis;* 5.5, *B. soror;* 5.6, *B. gemmipara.*


B. falciloba

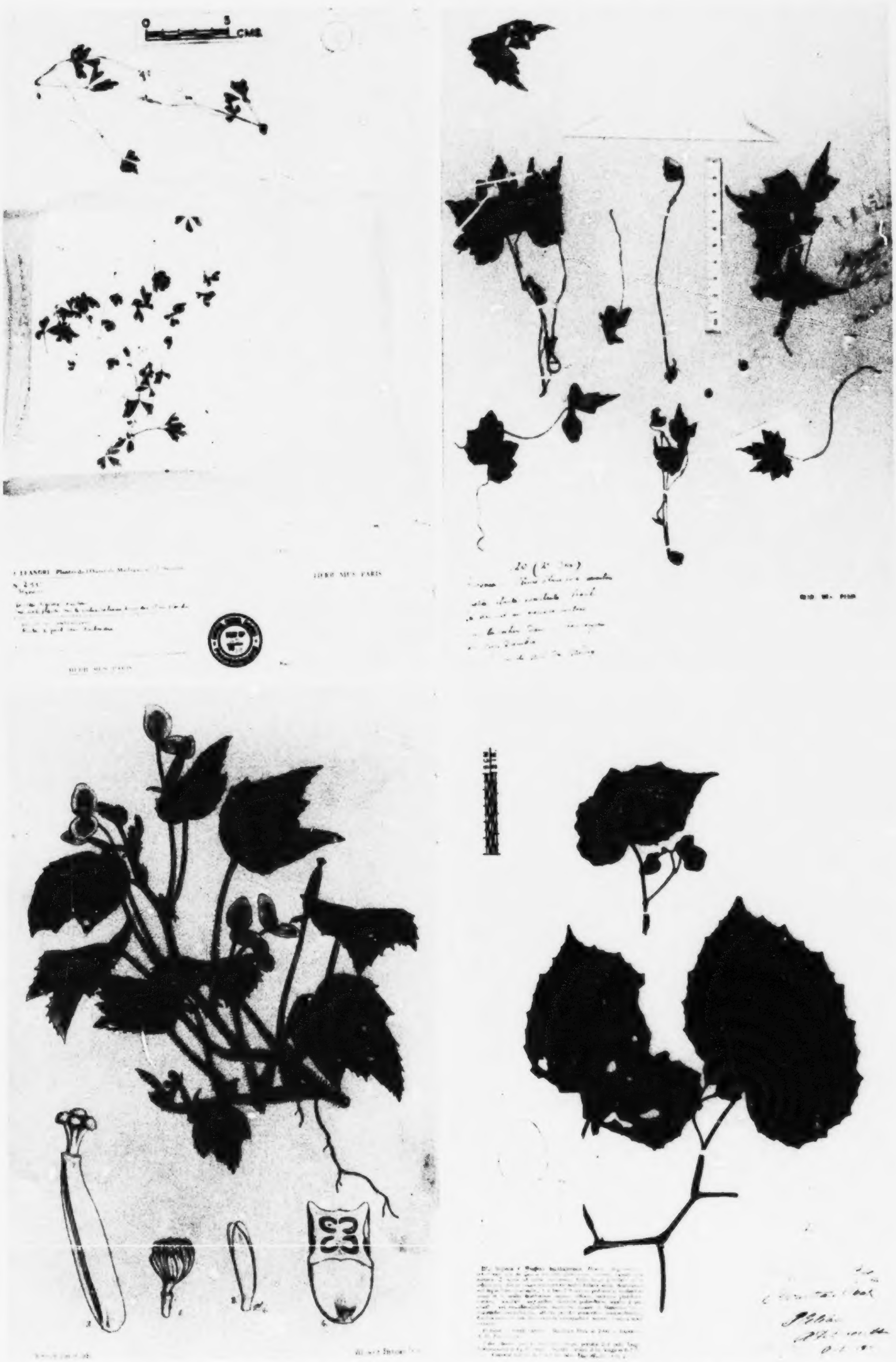




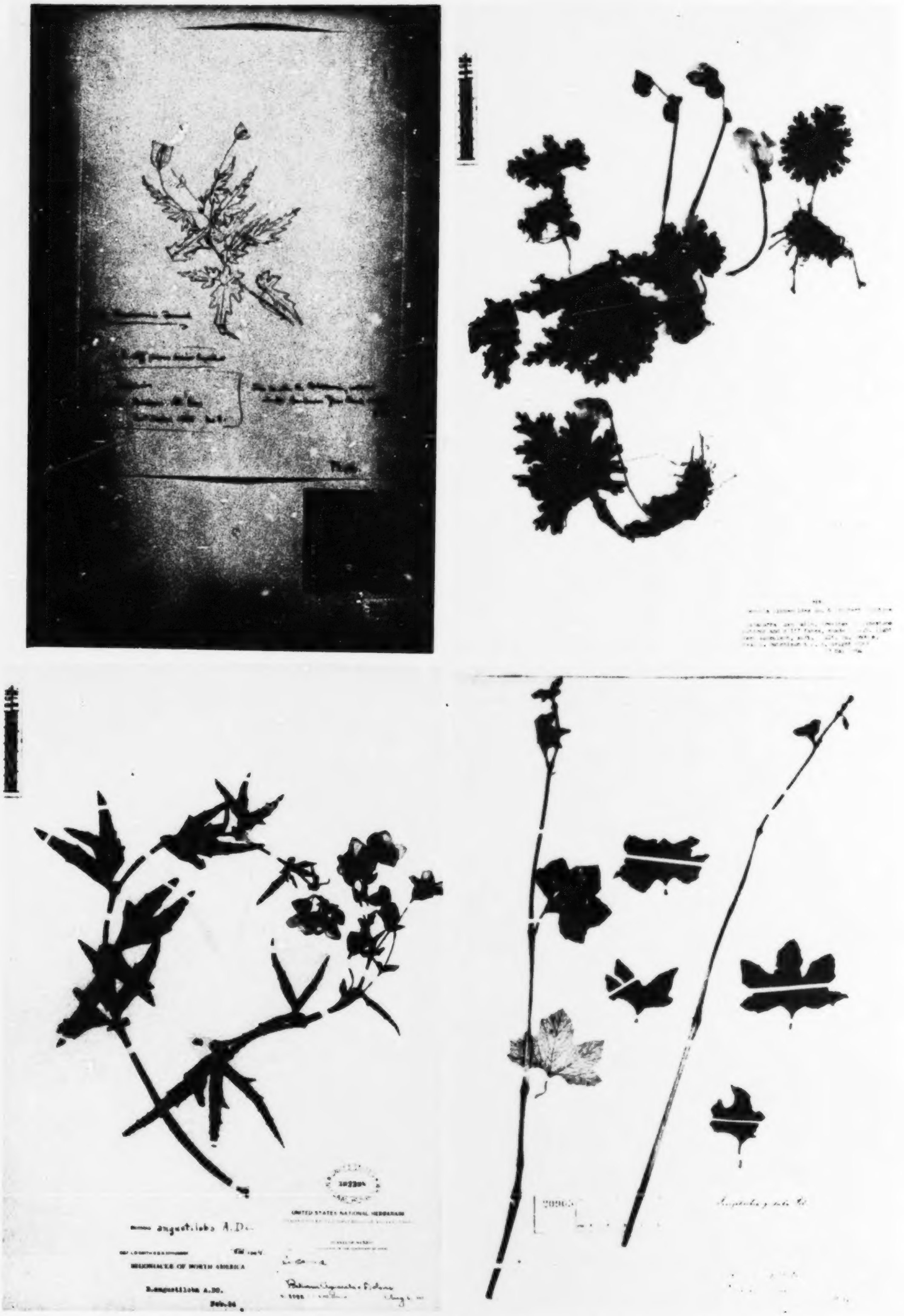
5.7, *B. falciloba;* 5.8, *B. biserrata;* 5.9, *B. diadema;* 5.10, *B. trigonoptera.*


Plants of Dutch New Guinea
Mus. bot. Berol.

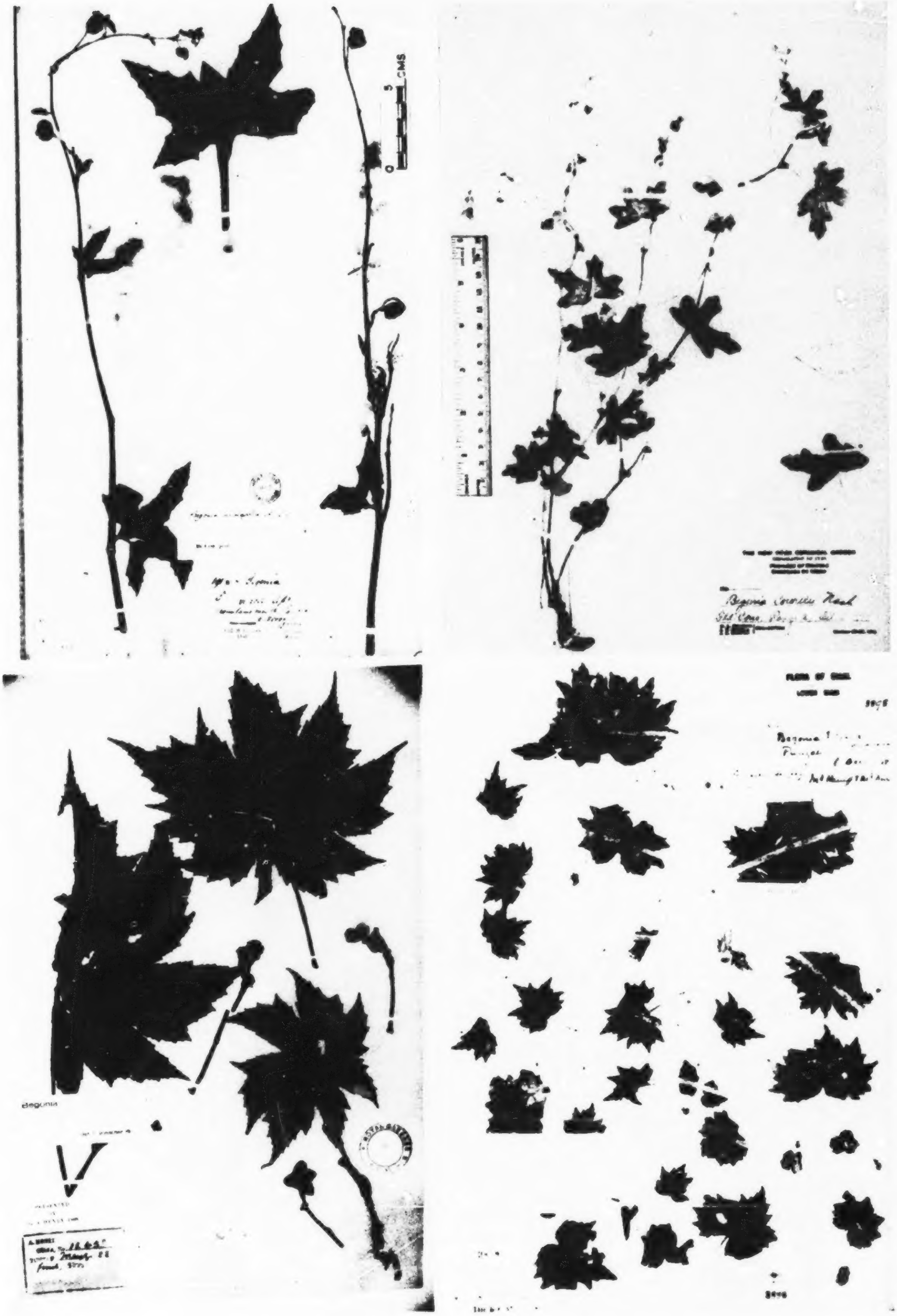
5.11, *B. heracleifolia;* 5.12, *B. oligandra;* 5.13, *B. suffruticosa;* 5.14, *B. partita.*


0 5 CMS
HERB. MUS. PARIS
HERB. MUS. PARIS
HERB. MUS. PARIS

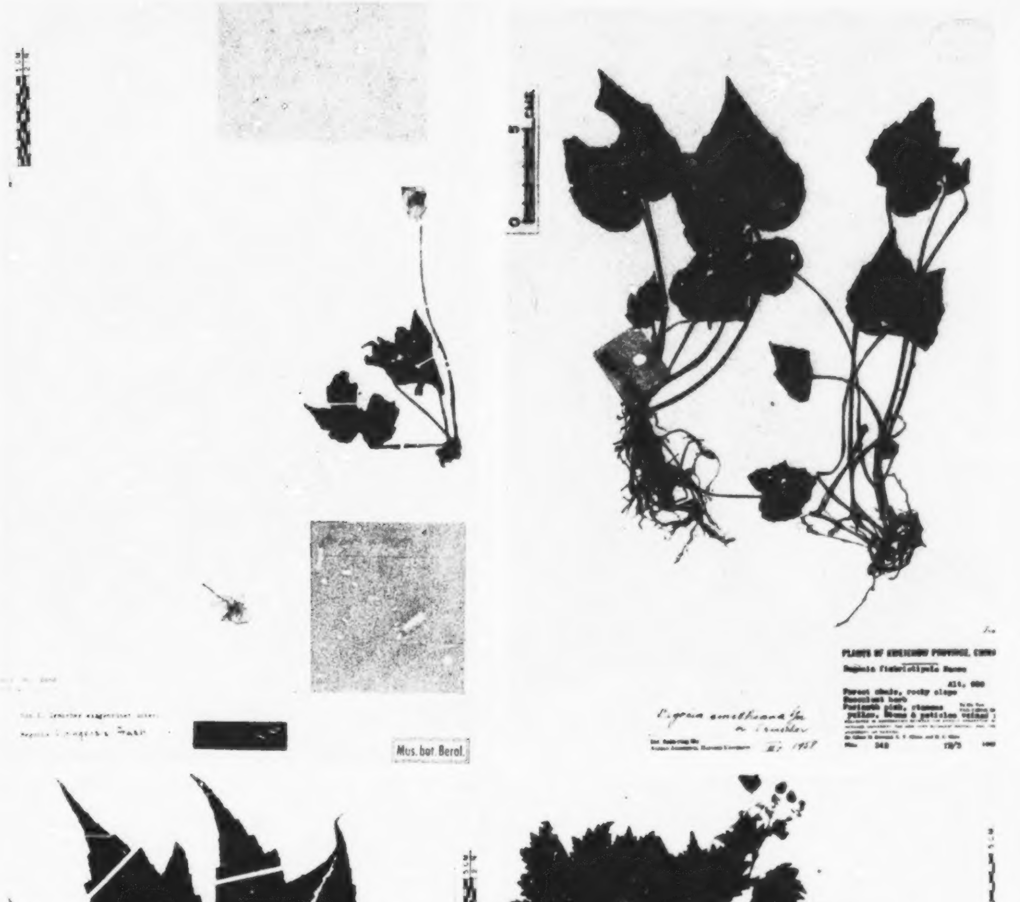
5.15, *B. leandrii;* 5.16, *B. bernieri;* 5.17, *B. prismatocarpa;* 5.18, *B. bonthainensis.*


angustiloba A.DC.
UNITED STATES NATIONAL HERBARIUM
BEGONIACEAE OF NORTH AMERICA
B. angustiloba A.DC.
20965

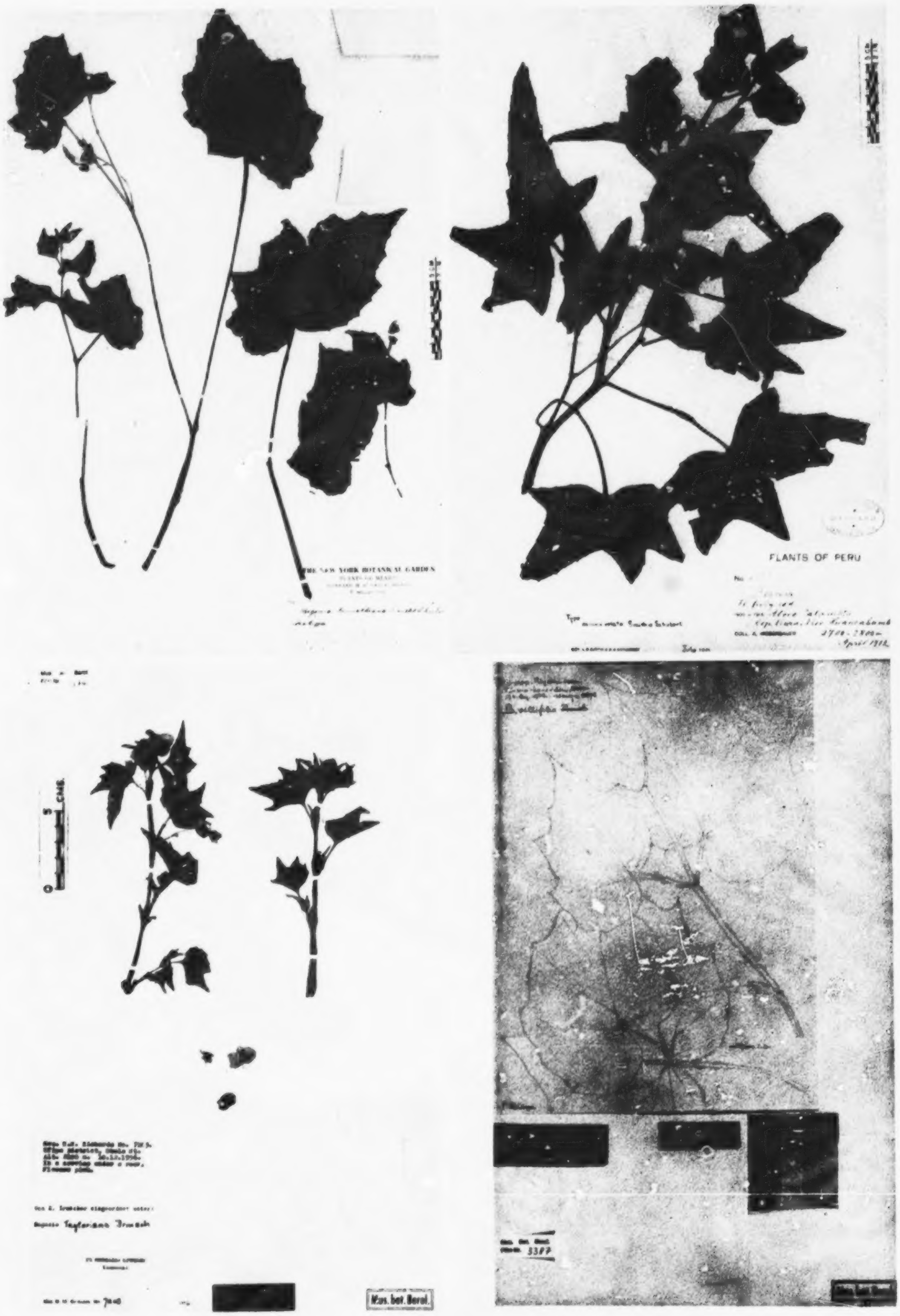
5.19, *B. buttonii;* 5.20, *B. weberbaueri;* 5.21, *B. angustiloba;* 5.22, *B. pedata.*


5
0
CMS
Begonia cowellii Nash
Begonia

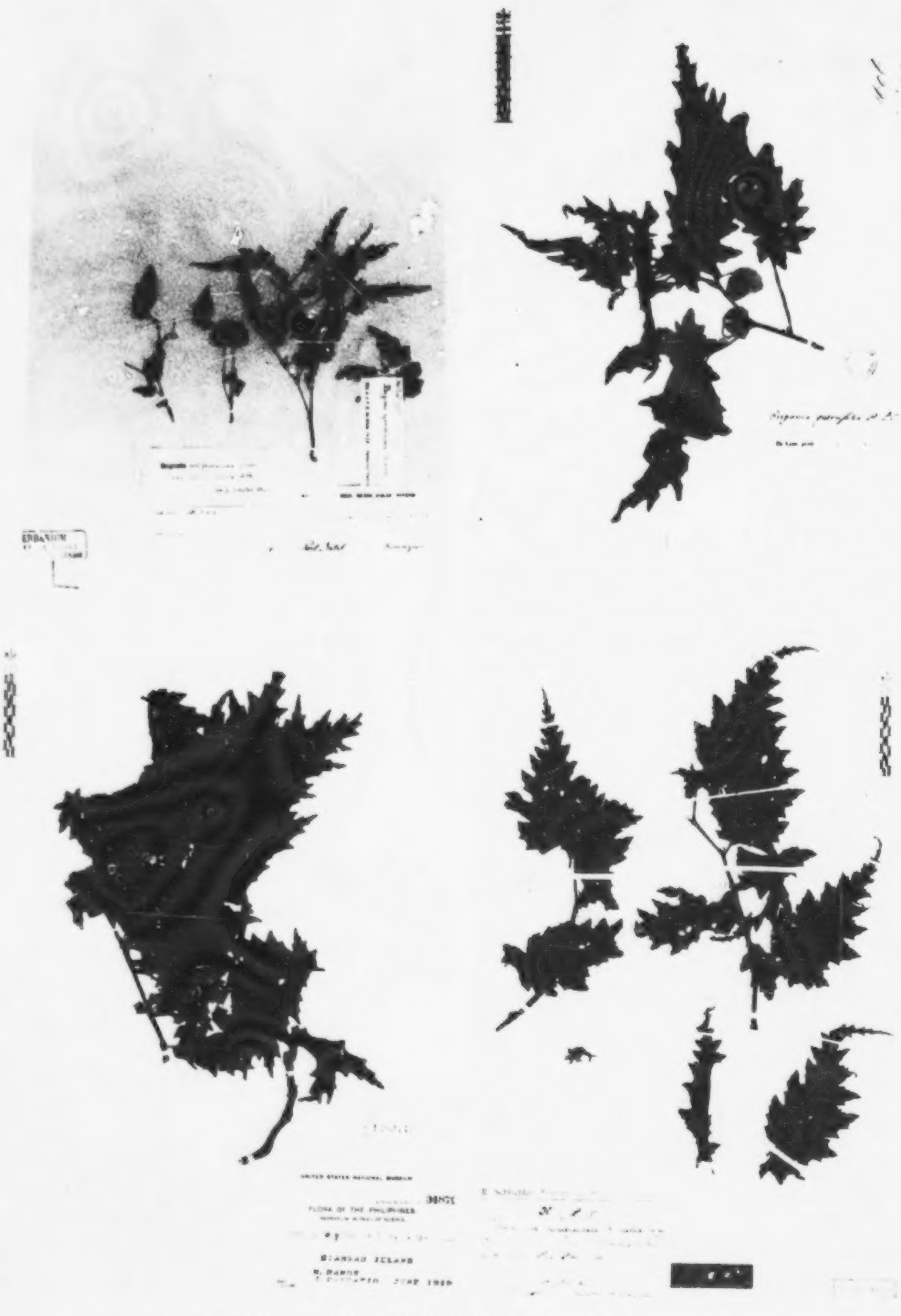
5.23, *B. anodifolia;* 5.24, *B. cowellii;* 5.25, *B. lacerata;* 5.26, *B. aceroides.*


Mus. bot. Berol.
PLANTS OF KWEICHOW PROVINCE, CHINA
Mus. bot. Berol.
MEXICAN FLORA

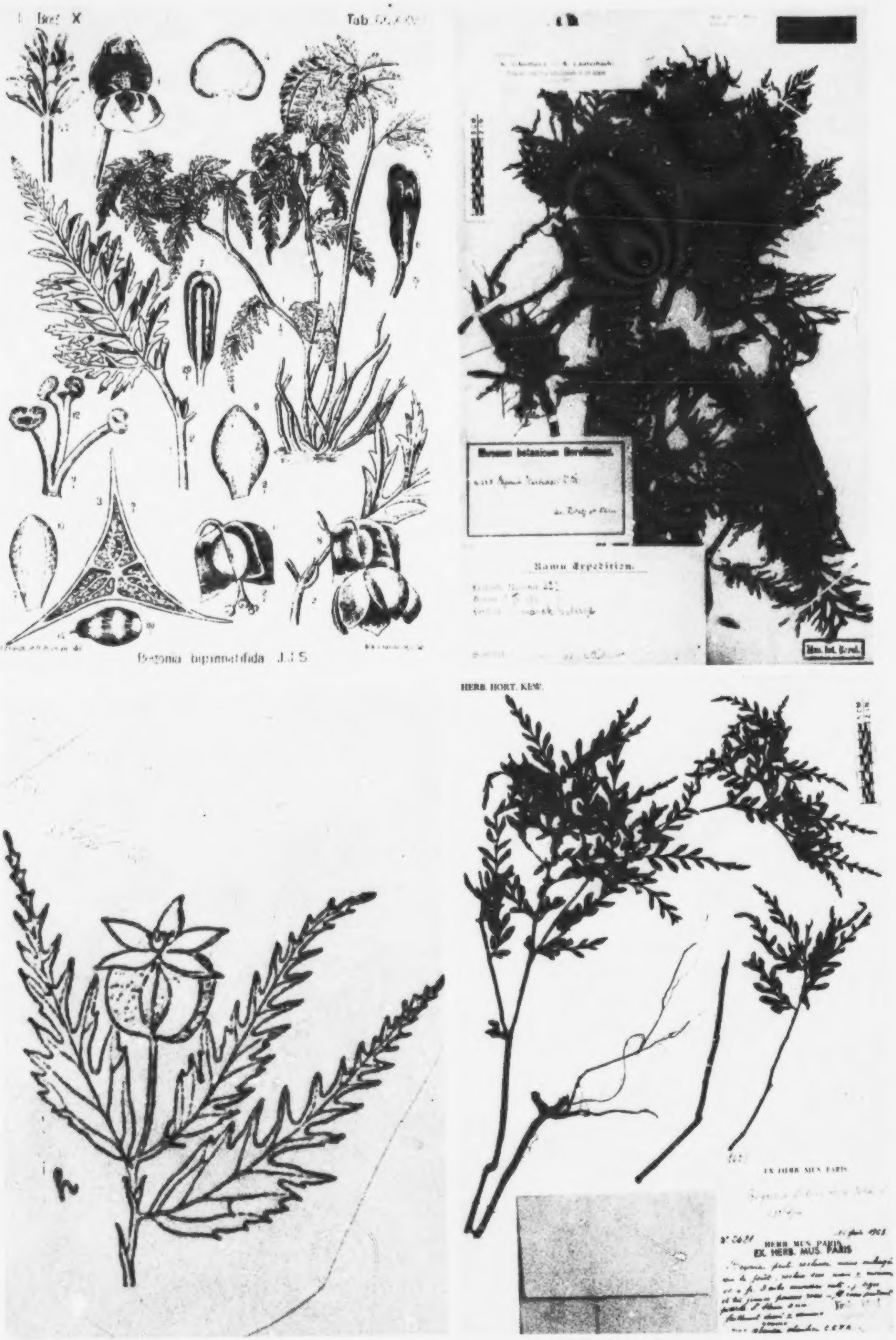
5.27, *B. lipingensis;* 5.28, *B. smithiana;* 5.29, *B. aglaia;* 5.30, *B. portillana.*


THE NEW YORK BOTANICAL GARDEN
FLANTS OF PERU
Type
Mus. bot. Berol.

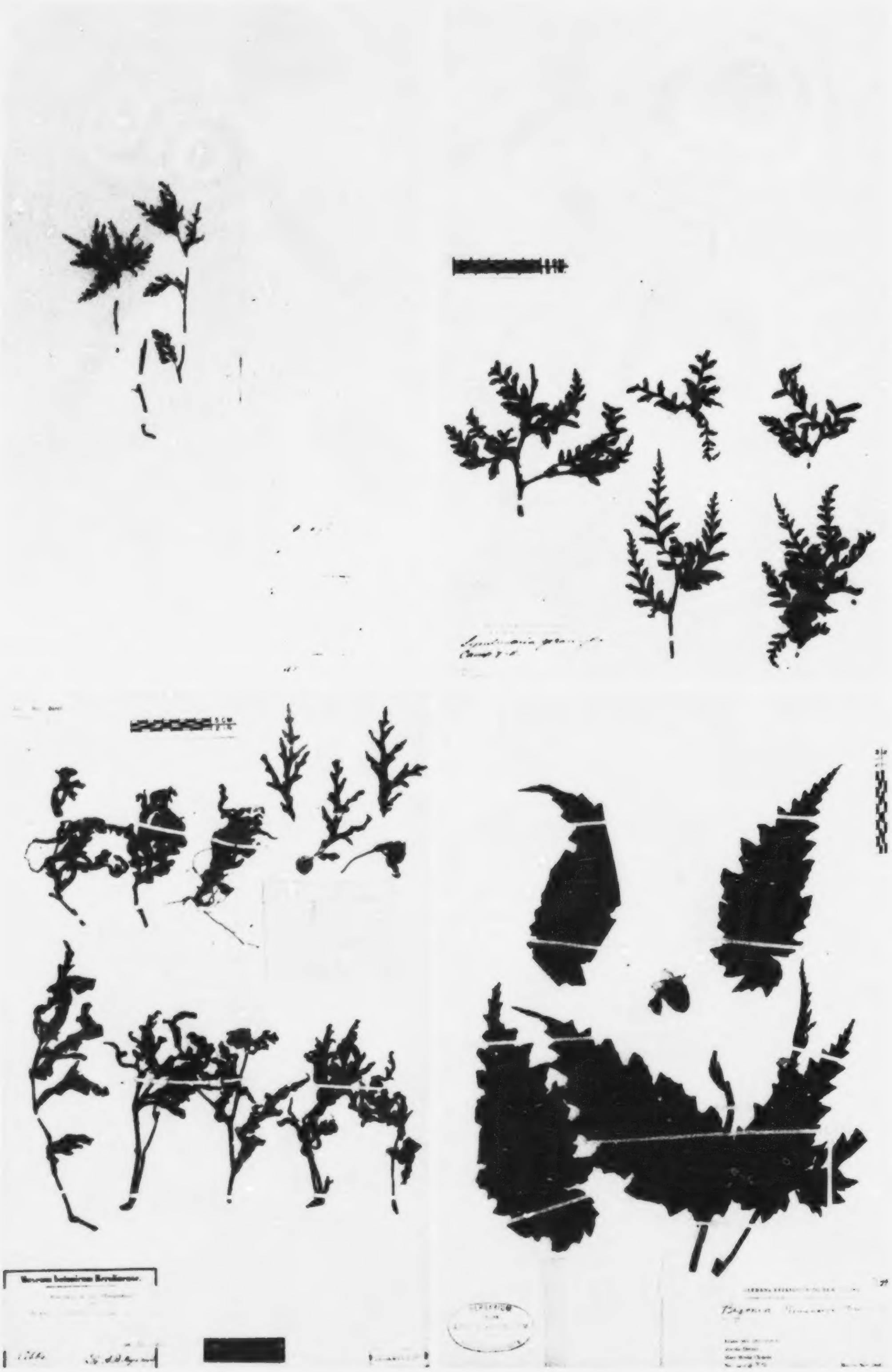
5.31, *B. fernaldiana;* 5.32, *B. velata;* 5.33, *B. tayloriana;* 5.34, *B. villifolia.*



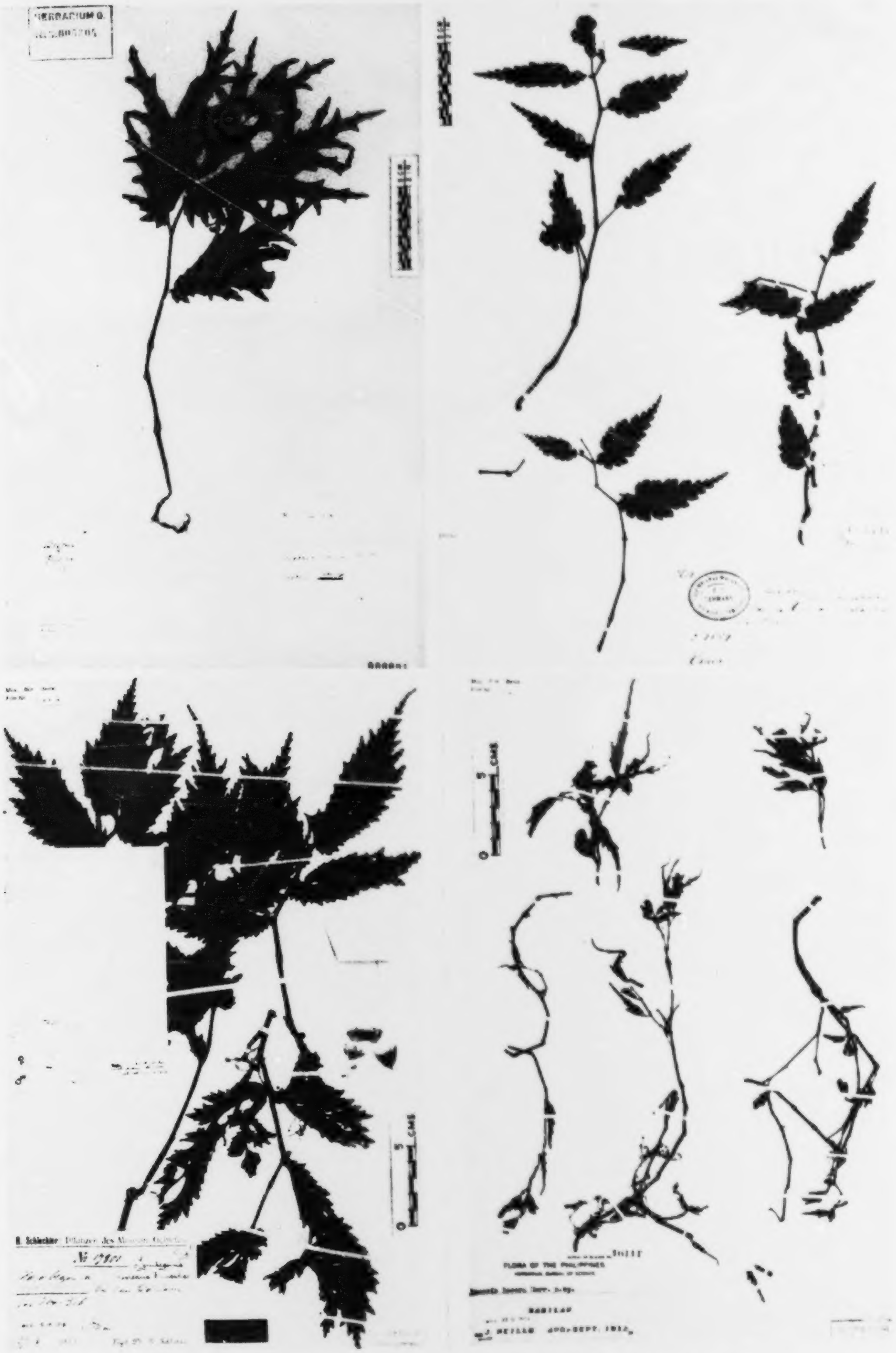
6.1, *B. gueinziana;* 6.2, *B. quercifolia;* 6.3, *B. longibractea;* 6.4, *B. serratipetala.*


Tab
Begonia bipinnatifida J.J.S
Museum botanicum Berolinense
Ramu Expedition
Mus. bot. Berol.
HERB. HORT. KEW.
EX HERB. MUS. PARIS
HERB. MUS. PARIS
h

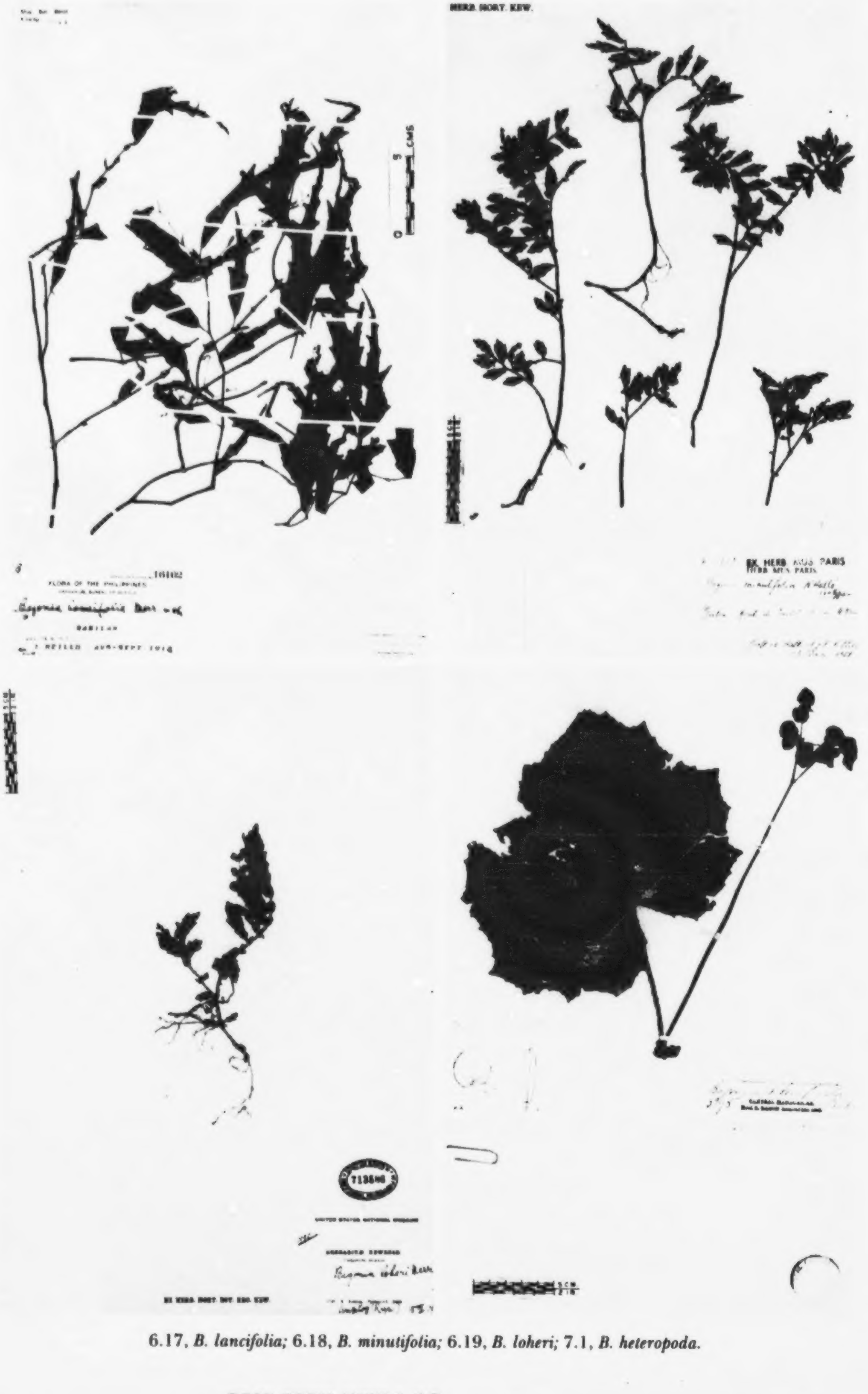
6.5, *B. bipinnatifida;* 6.6, *B. warburgii;* 6.7, *B. pinnatifida;* 6.8, *B. filicifolia.*



6.9, *B. aspleniifolia;* 6.10, *Symbegonia geraniifolia;* 6.11, *B. humilicaulis;* 6.12, *B. clemensiae.*



6.13, *B. incisa;* 6.14, *B. hexandra;* 6.15, *Symbegonia mooreana;* 6.16, *B. lacera.*


HERB. HORT. KEW.
CMS
5
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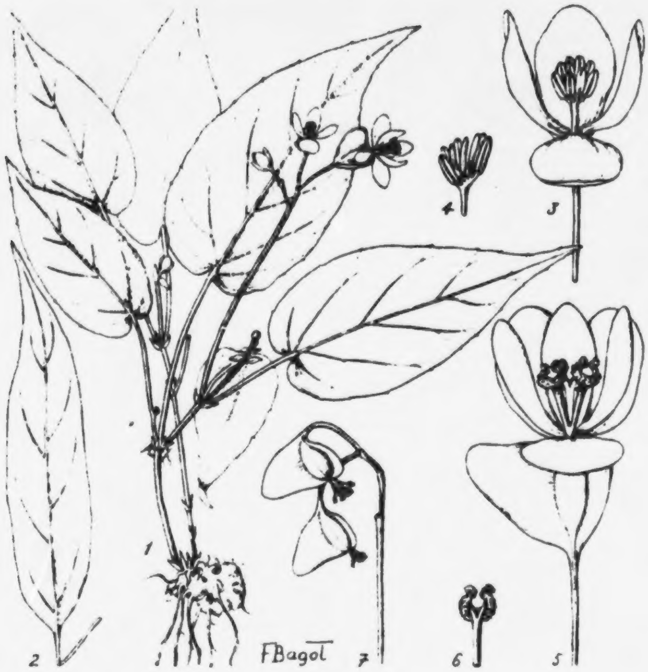
16102
FLORA OF THE PHILIPPINES
Begonia lancifolia Merr.
EX. HERB. MUS. PARIS
HERB. MUS. PARIS
UNITED STATES NATIONAL MUSEUM
Begonia loheri Merr.

6.17, *B. lancifolia;* 6.18, *B. minutifolia;* 6.19, *B. loheri;* 7.1, *B. heteropoda.*


1
2
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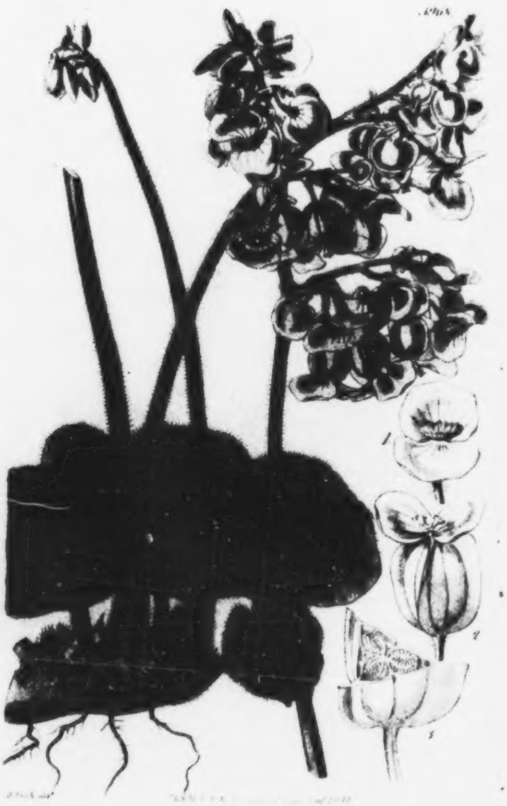
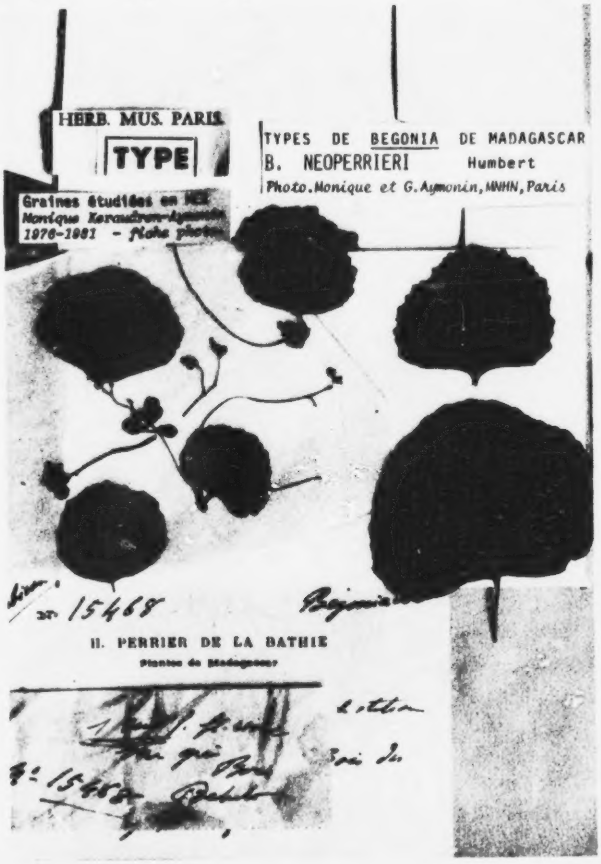
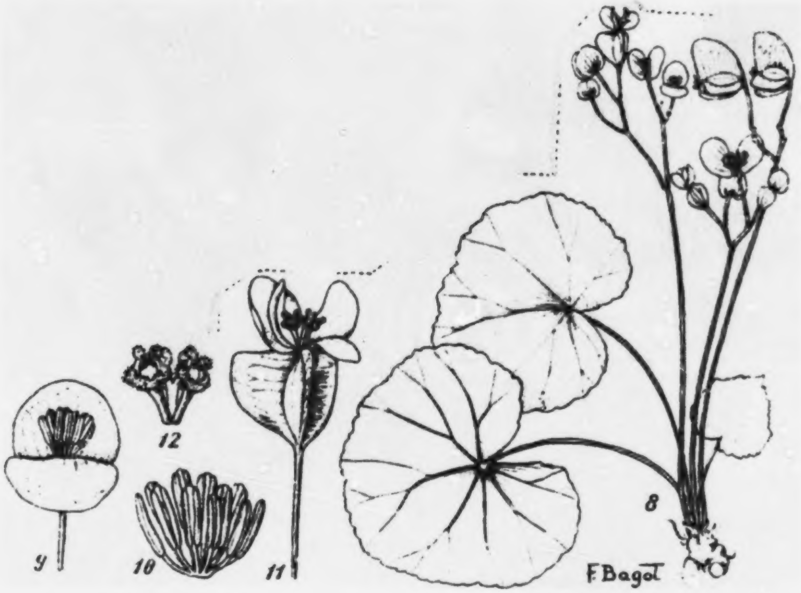
4
5
6
7
F Bagot




HERB. MUS. PARIS
TYPE
Graines étudiées en MEB
Monique Keraudren-Aymonin
1976-1981 - fiche photo
TYPES DE BEGONIA DE MADAGASCAR
B. NEOPERRIERI Humbert
Photo. Monique et G. Aymonin, MNHN, Paris
15468
H. PERRIER DE LA BATHIE
Plantes de Madagascar
15468

7.2, *B. antongilensis;* 7.3, *B. hydrocotylifolia;* 7.4, *B. neoperrieri.*


8
9
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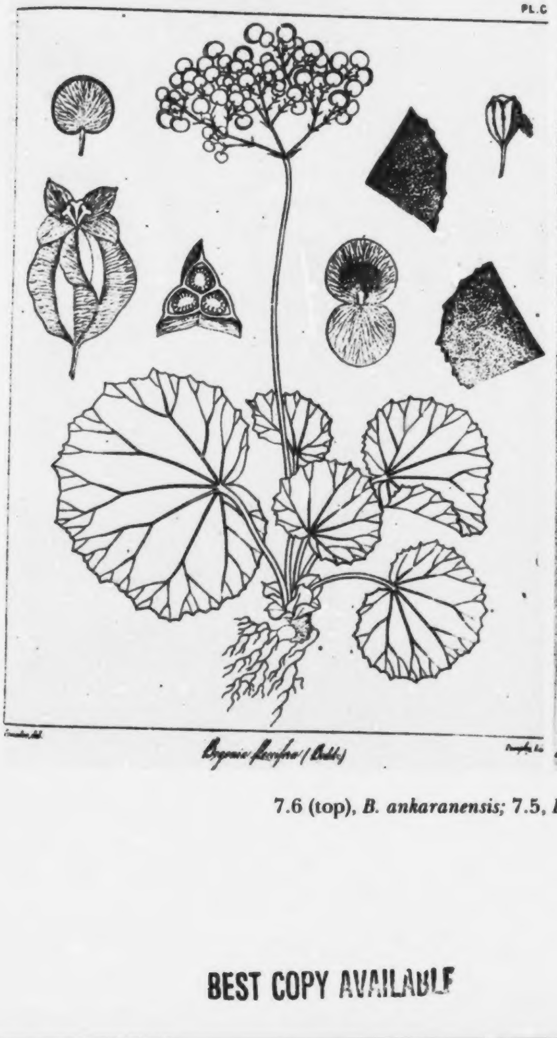
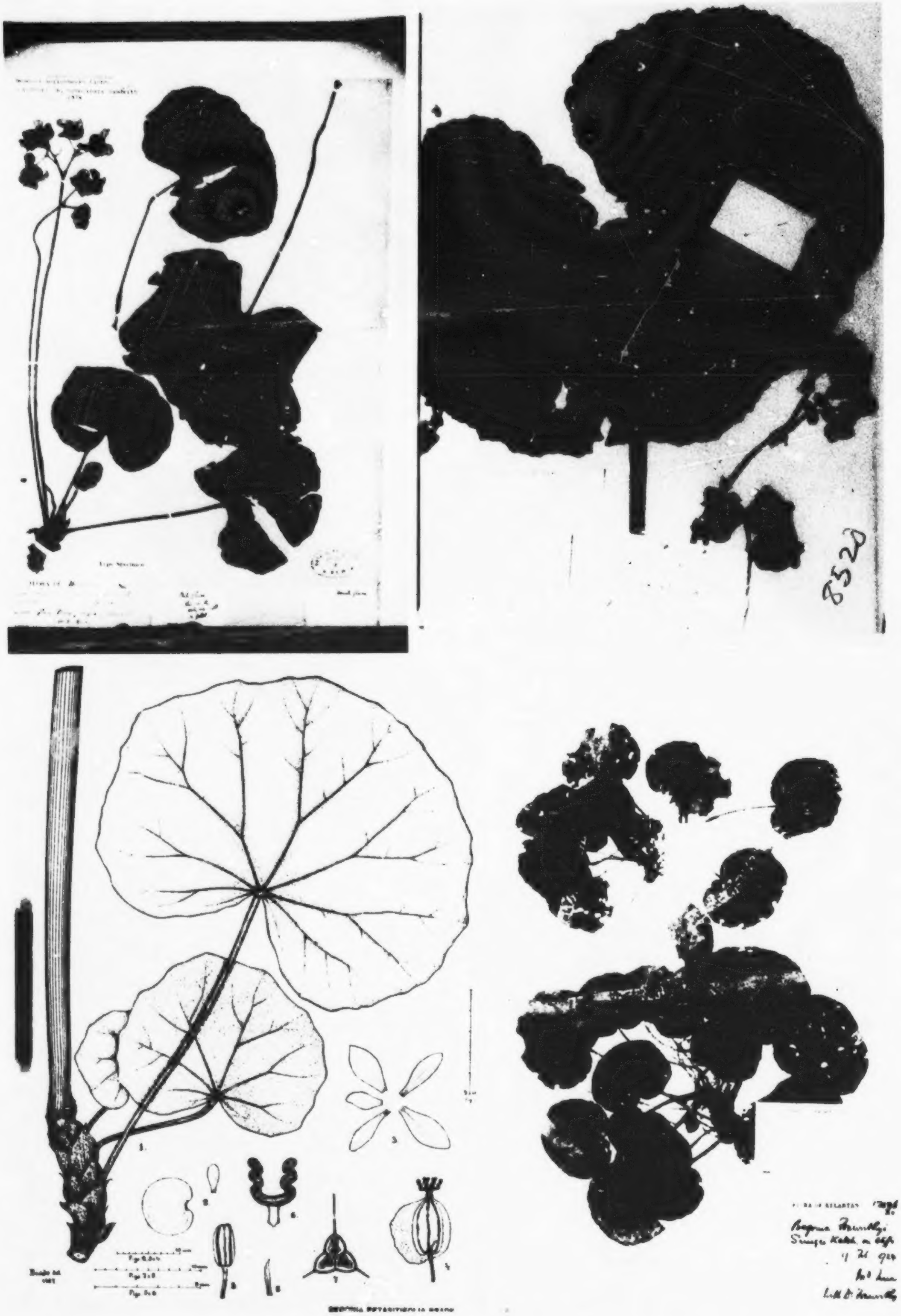
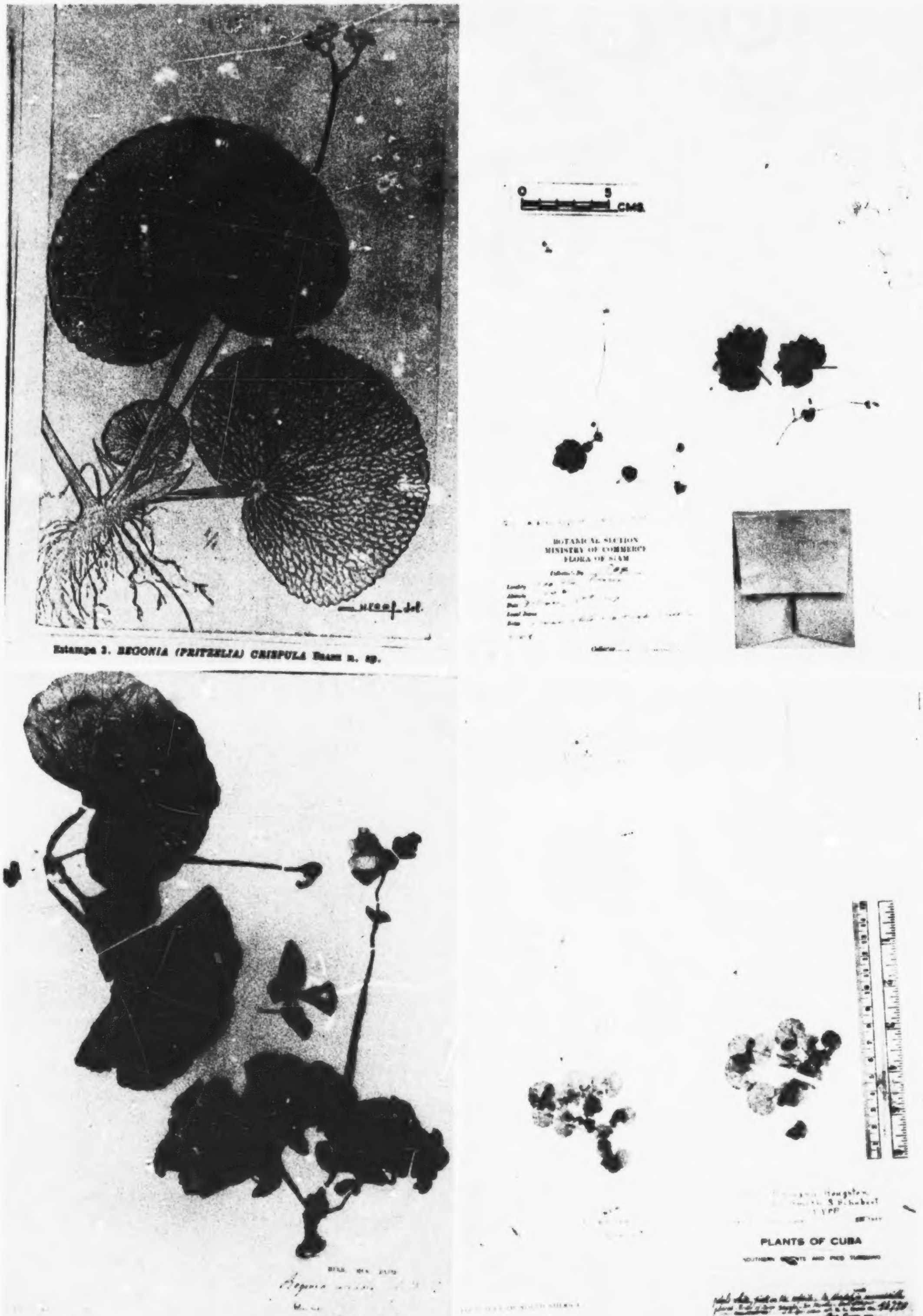
11
12
F. Bagot


PL. C
Begonia floccifera (Bedd.)

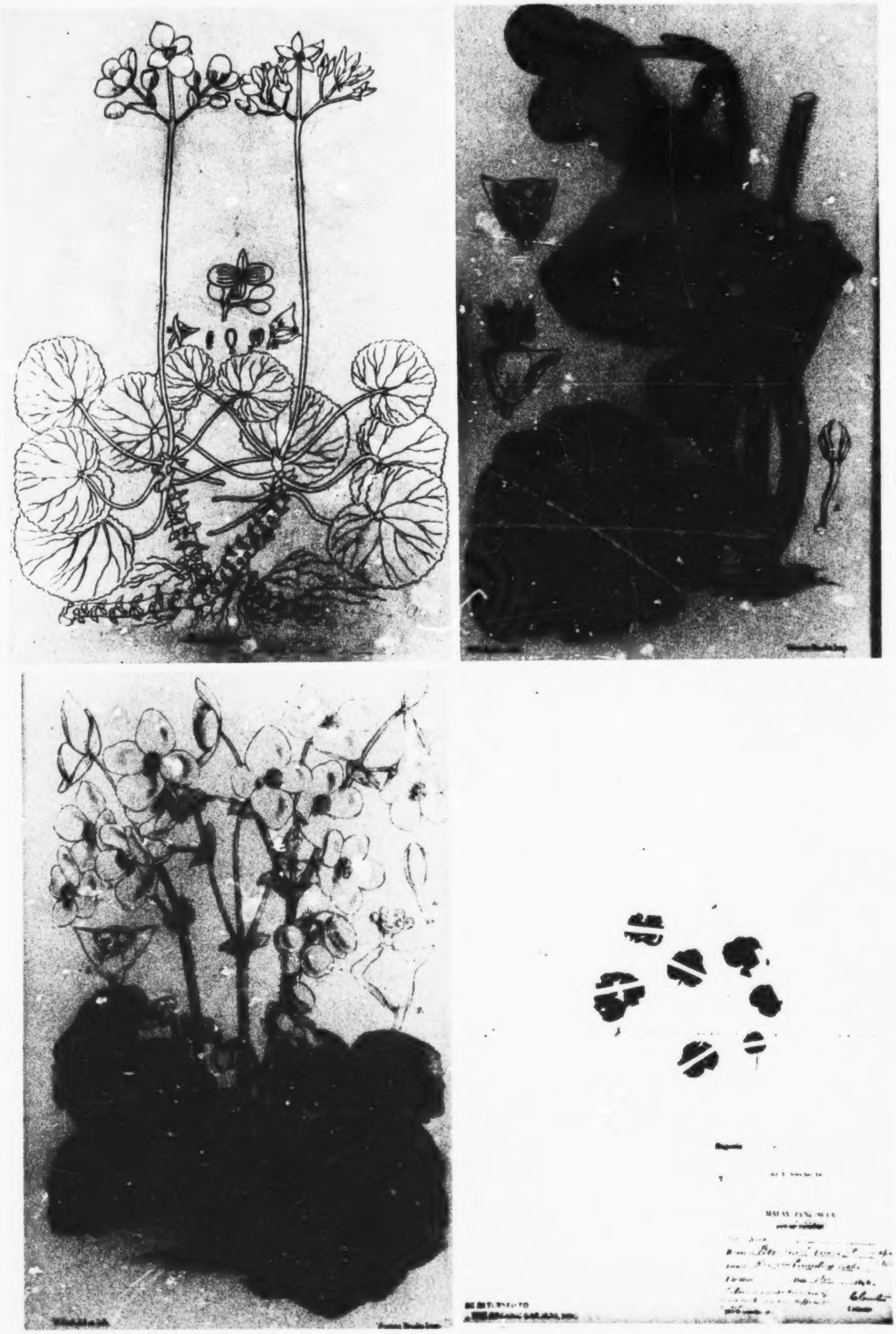
7.6 (top), *B. ankaranensis;* 7.5, *B. floccifera;* 7.7, *B. trullifolia.*


8520
KELANTAN

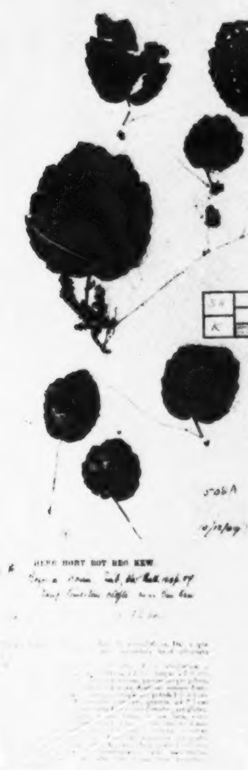
7.8, *B. hypolipara;* 7.9, *B. monophylla;* 7.10, *B. petasitifolia;* 7.11, *B. nurii.*

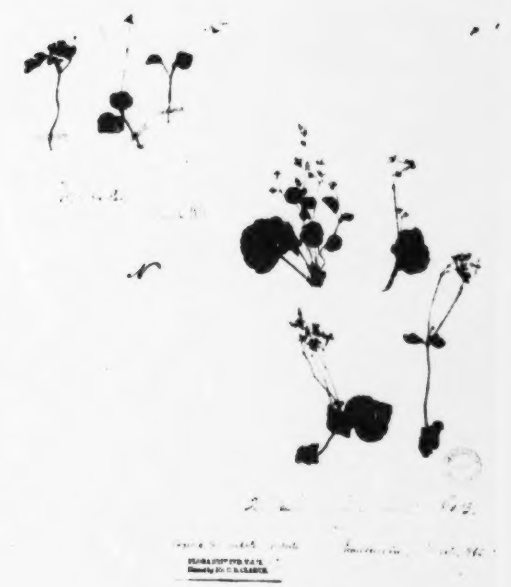

Estampa 3. BEGONIA (FRITZELIA) CRISPULA Brade n. sp.
0 5 CMS
BOTANICAL SECTION
MINISTRY OF COMMERCE
FLORA OF SIAM
PLANTS OF CUBA

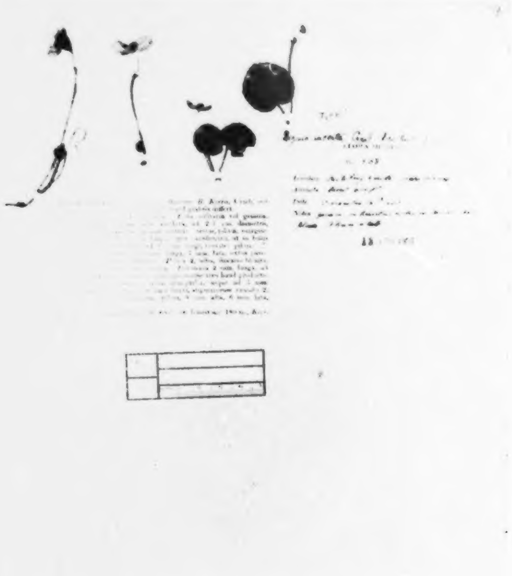
7.12, *B. crispula;* 7.13, *B. saxifragifolia;* 7.14, *B. tominana;* 7.15, *B. ekmanii.*



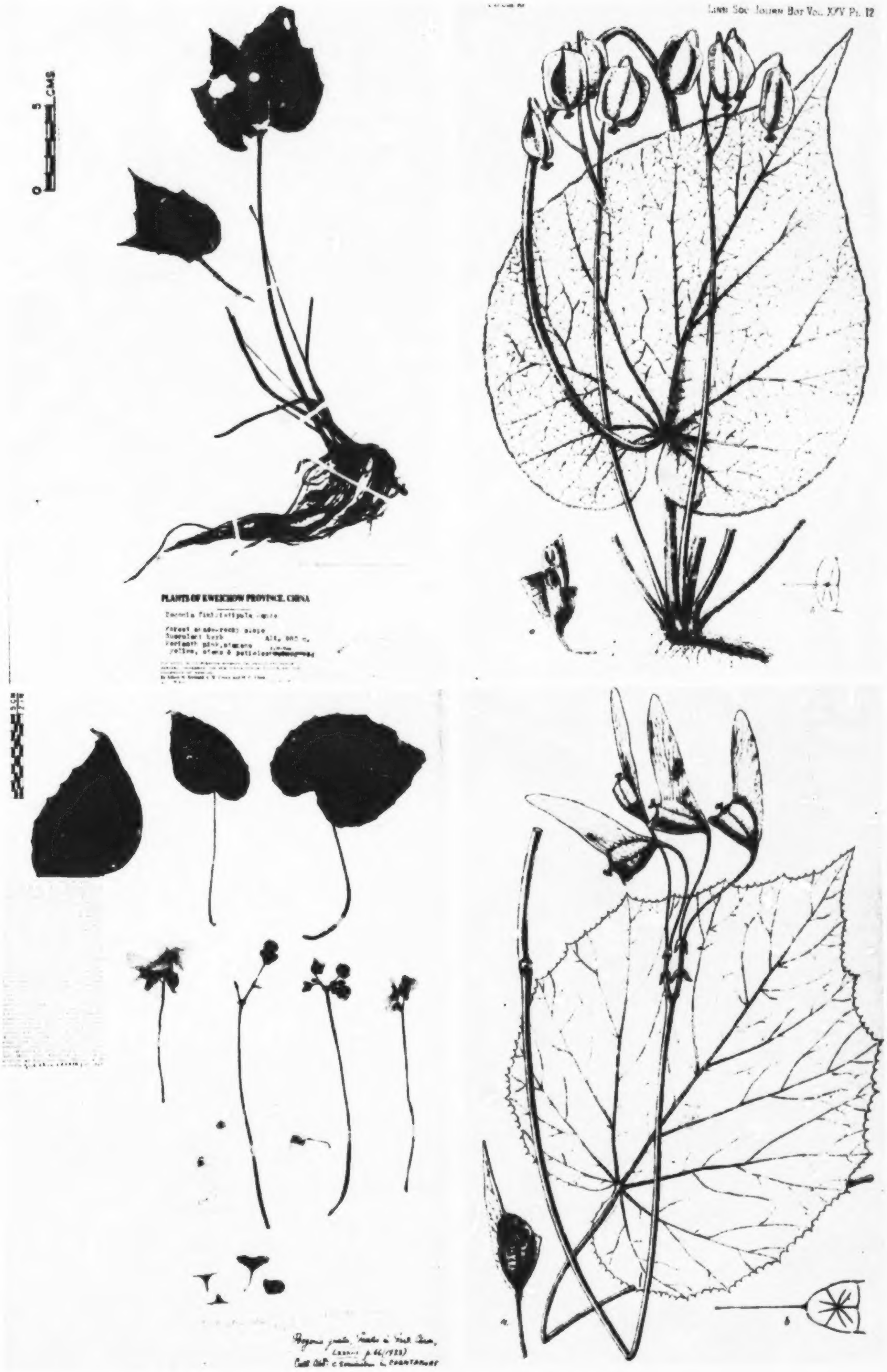
7.16, *B. rotundifolia;* 7.17, *B. veitchii;* 7.18, *B. geranioides;* 7.19, *B. intermixta.*



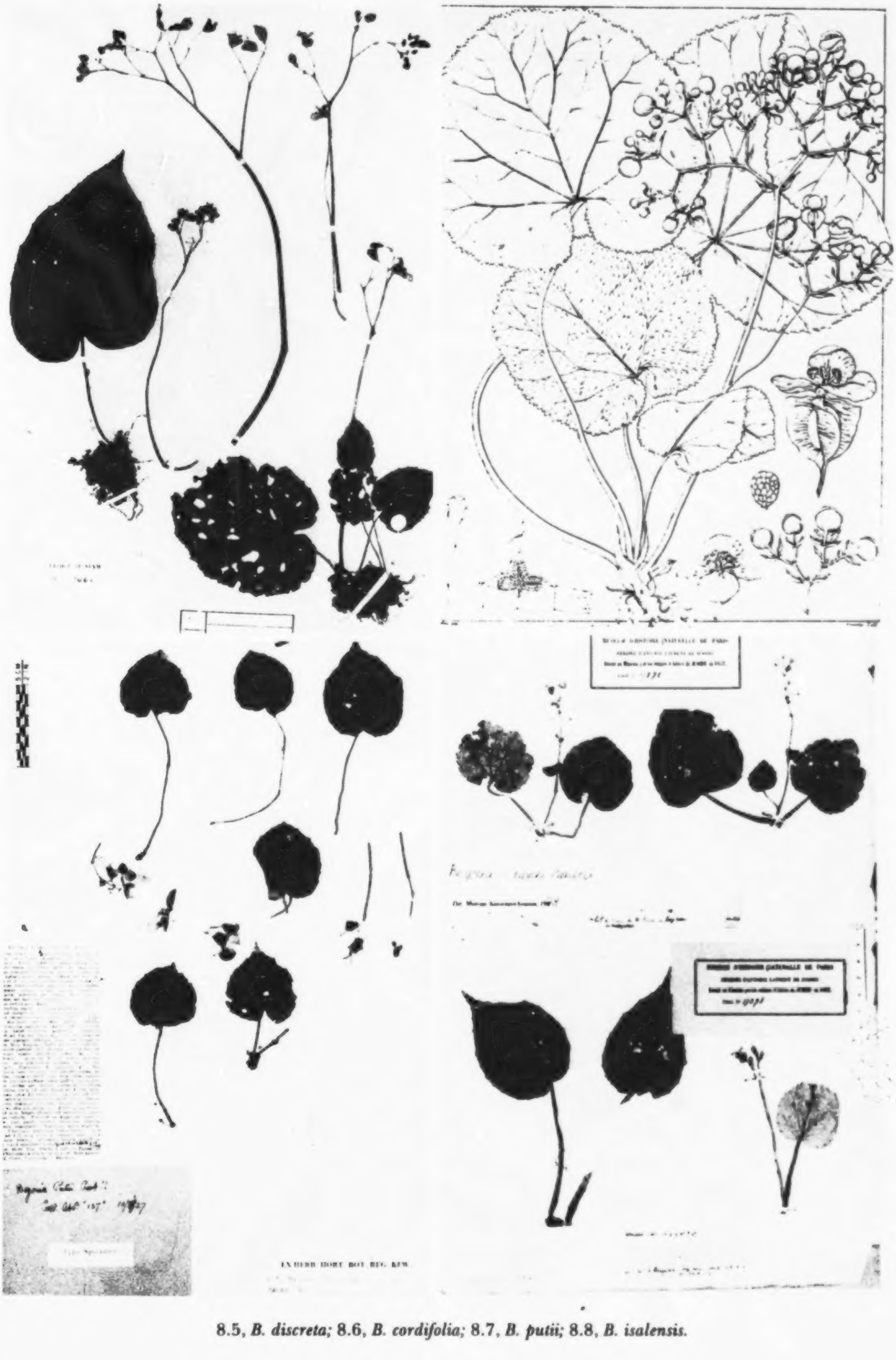




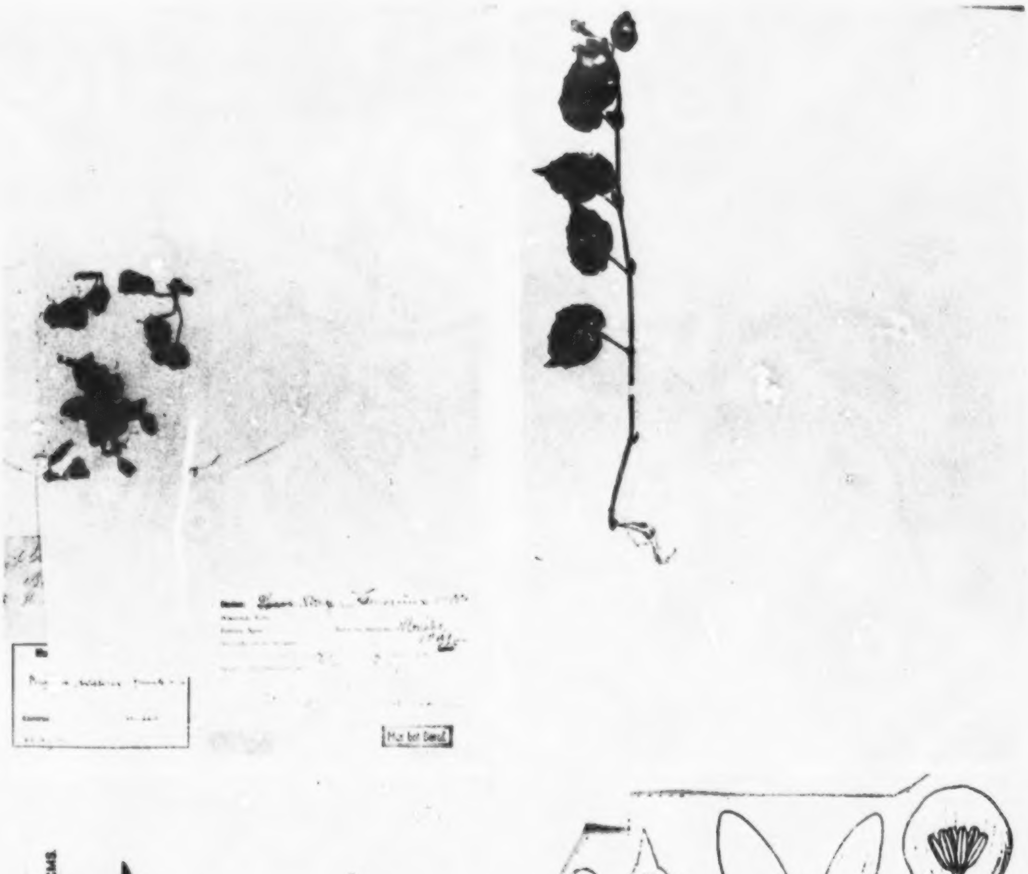
7.20, *B. kerrii*; 7.21, *B. kalabenonensis*; 7.22, *B. tricuspidata*; 7.23, *B. incerta*.


0 5 CMS
Linn Soc Journ Bot Vol XXV Pl 12
PLANTS OF KWEICHOW PROVINCE, CHINA
Forest shade-rocky slope
Succulent herb
Perianth pink, stamens
yellow, stems & petioles
a
b

8.1, *B. fimbristipula*; 8.2, *B. obversa*; 8.3, *B. grata*; 8.4, *B. adscendens*.


Begonia Putii Craib
EX HERB HORT BOT REG KEW

8.5, *B. discreta;* 8.6, *B. cordifolia;* 8.7, *B. putii;* 8.8, *B. isalensis.*


0
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CMS.
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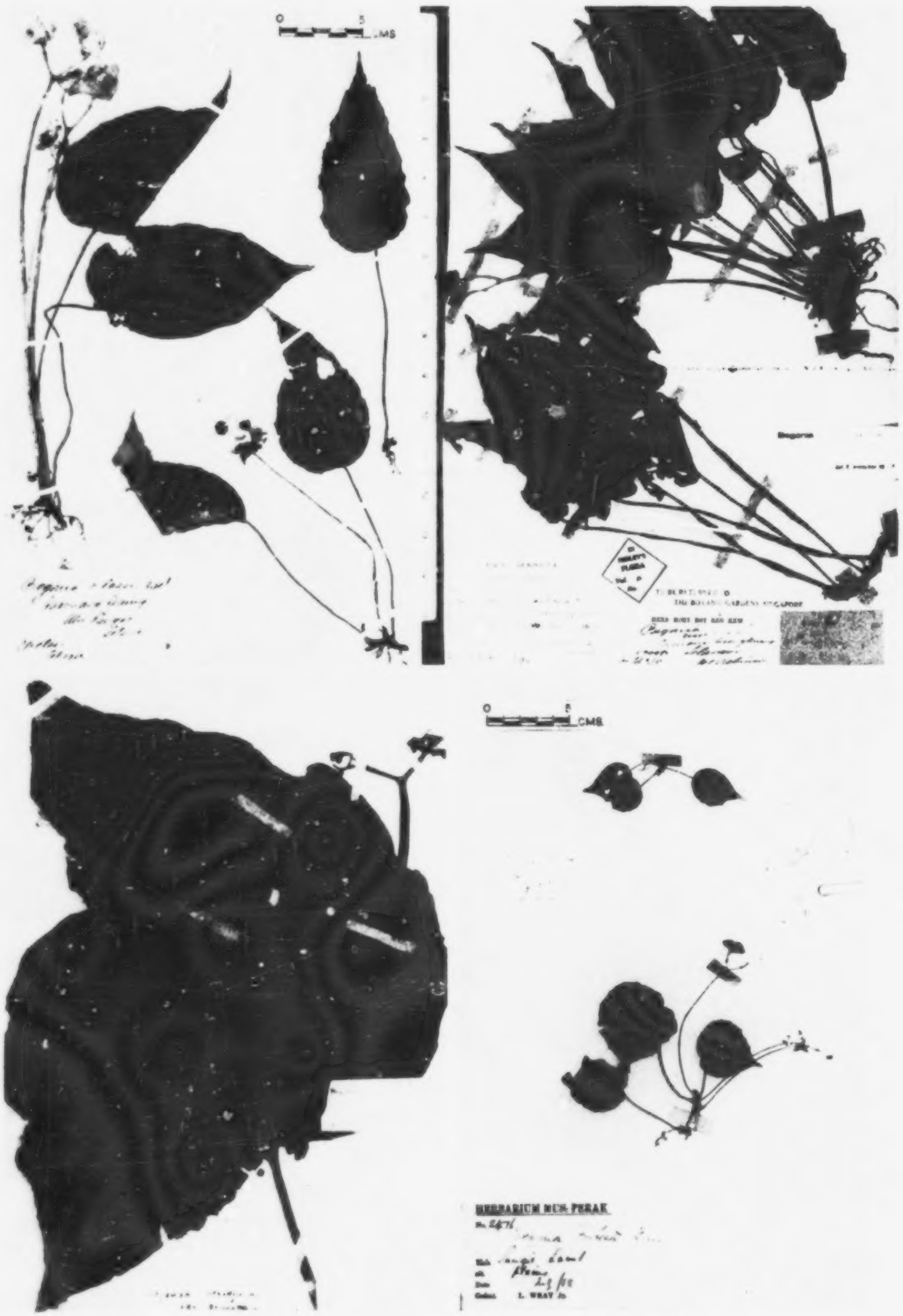
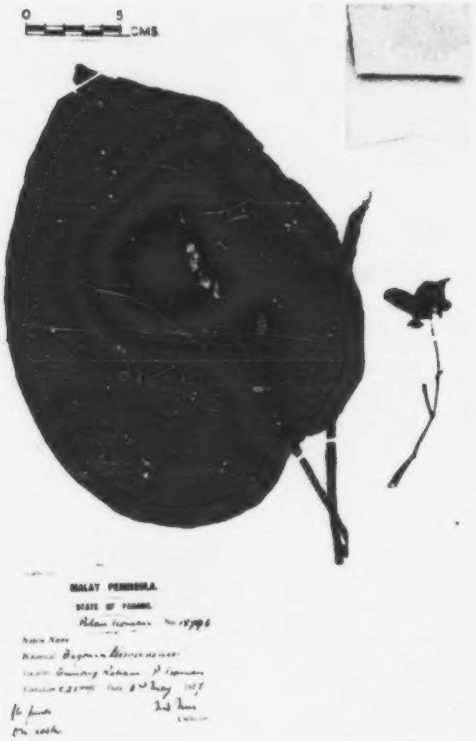
24
F. Bagot

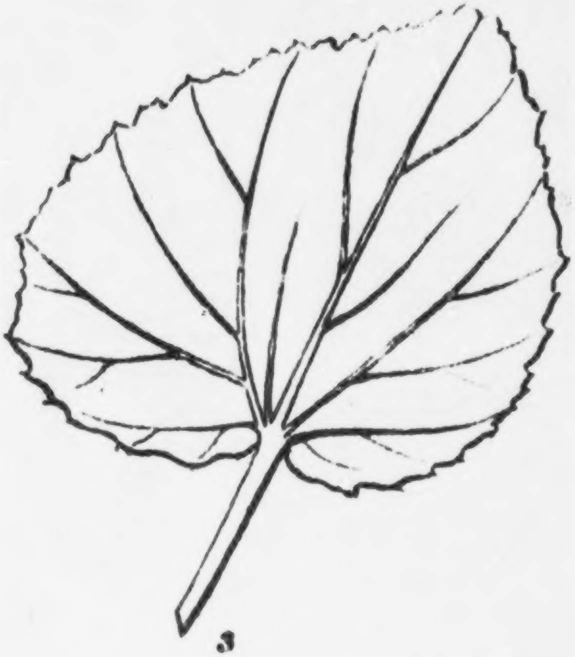
8.9, *B. subtilis;* 8.10, *B. horsfieldii;* 8.11, *B. moulmeinensis;* 8.12, *B. anjuanensis.*

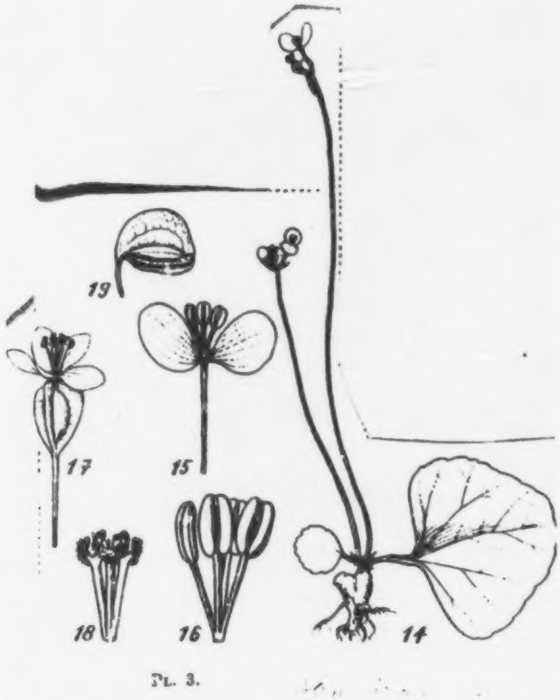
BEST COPY AVAILABLE


0 5 CMS
Begonia
TO BE RETURNED TO THE BOTANIC GARDENS SINGAPORE
HERB HORT BOT REG KEW
RIDLEY'S FLORA
0 5 CMS
HERBARIUM MUS. PERAK
L. WRAY Jr

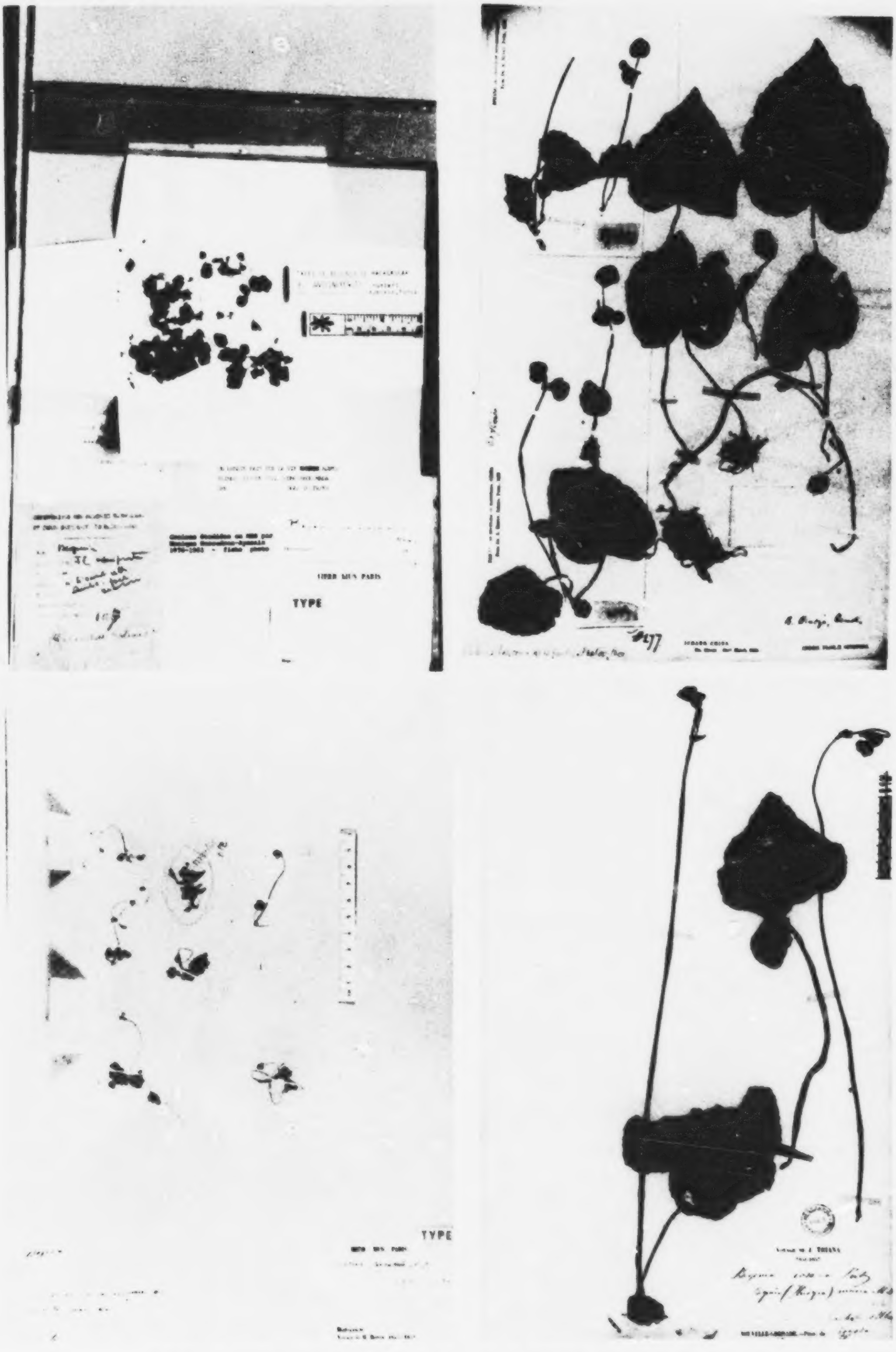
8.13, *B. klossii;* 8.14, *B. alpina;* 8.15, *B. rheifolia;* 8.16, *B. forbesii.*


0 5 CMS
MALAY PENINSULA.
STATE OF PAHANG.

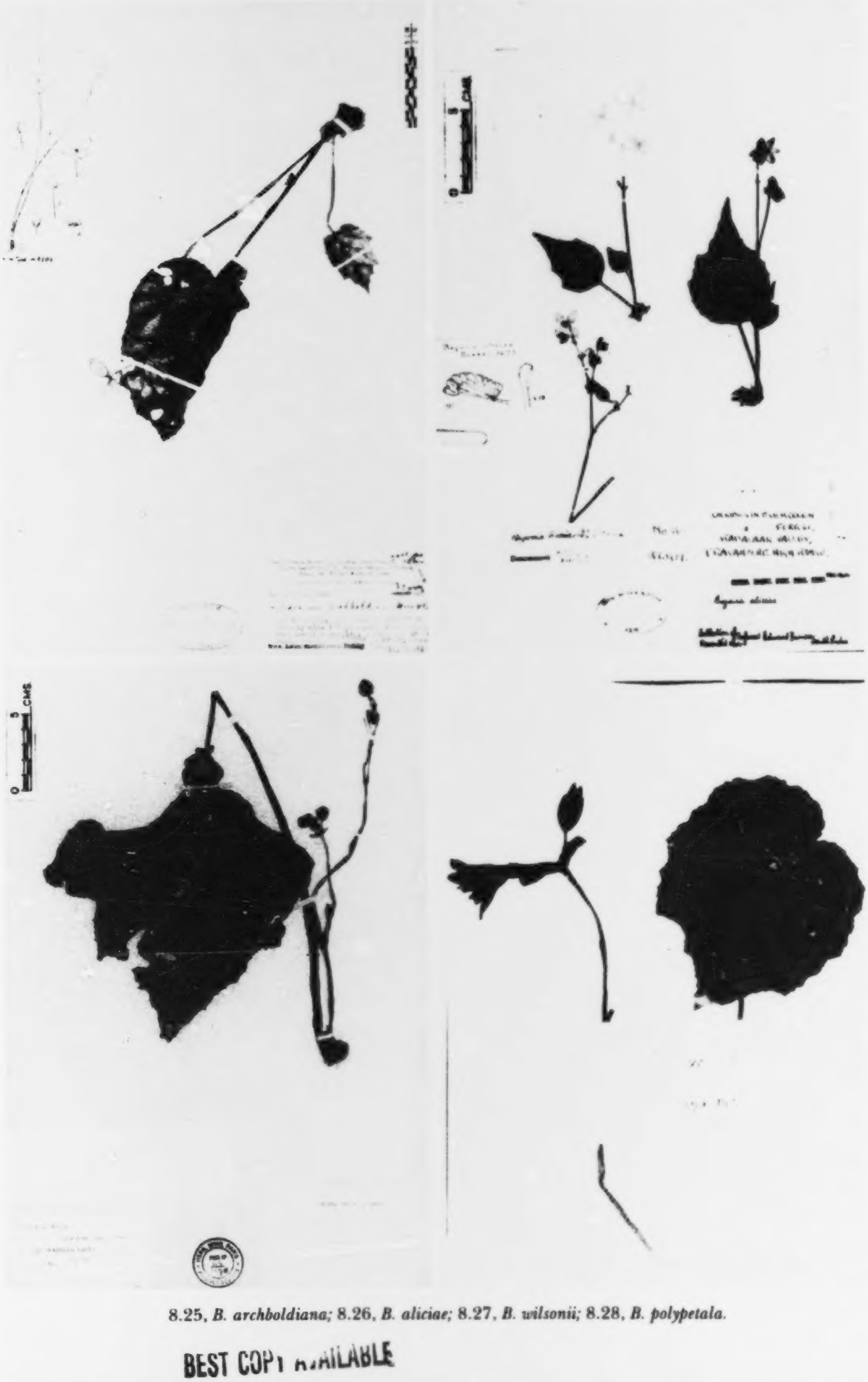



19
17
15
18
16
14
PL. 3.

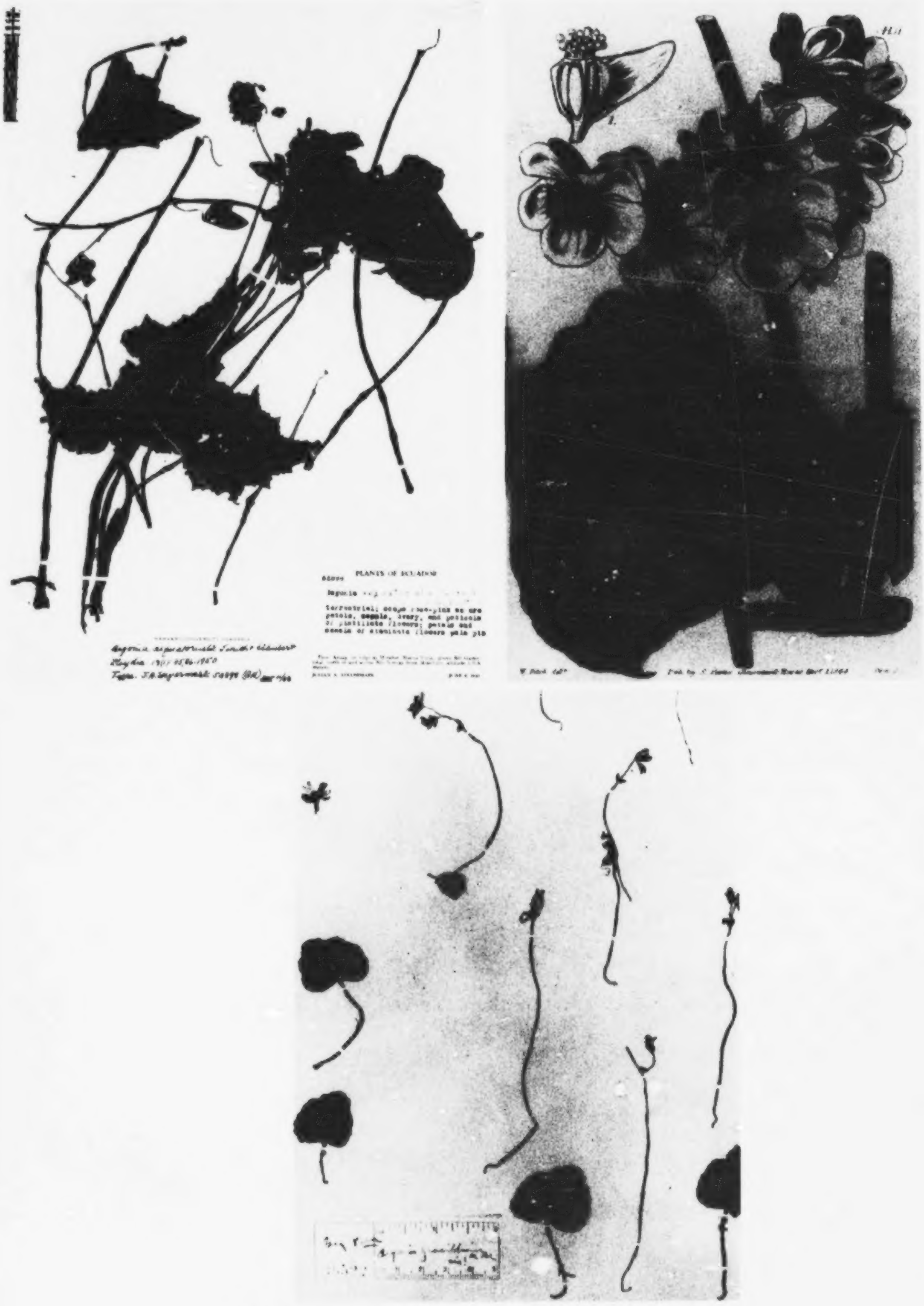
8.17, *B. tiomanensis;* 8.18, *B. crenata;* 8.19, *B. ovatifolia;* 8.20, *B. sambiranensis.*



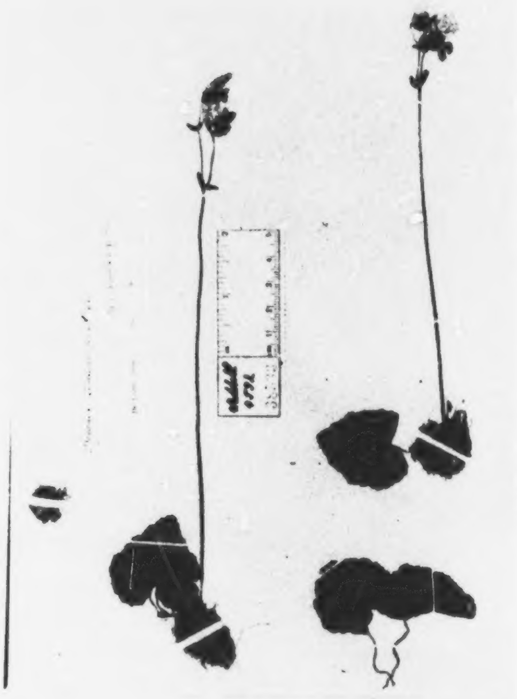
8.21, *B. antsingyensis;* 8.22, *B. henryi;* 8.23, *B. perpusilla;* 8.24, *B. macra.*

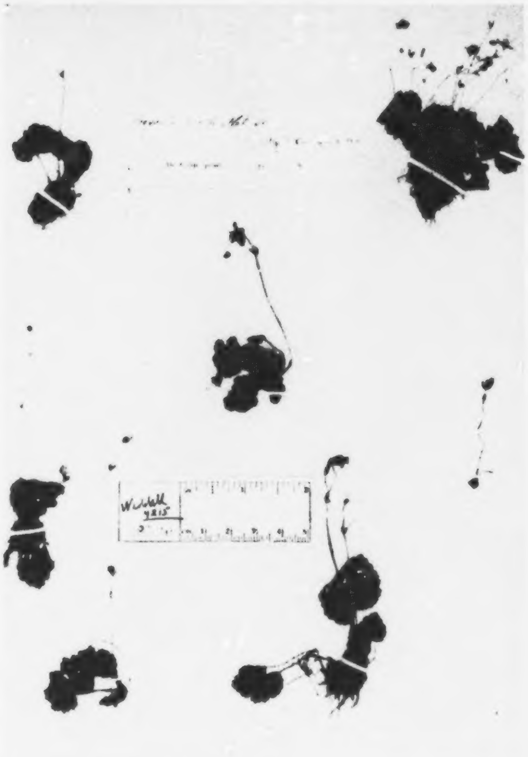


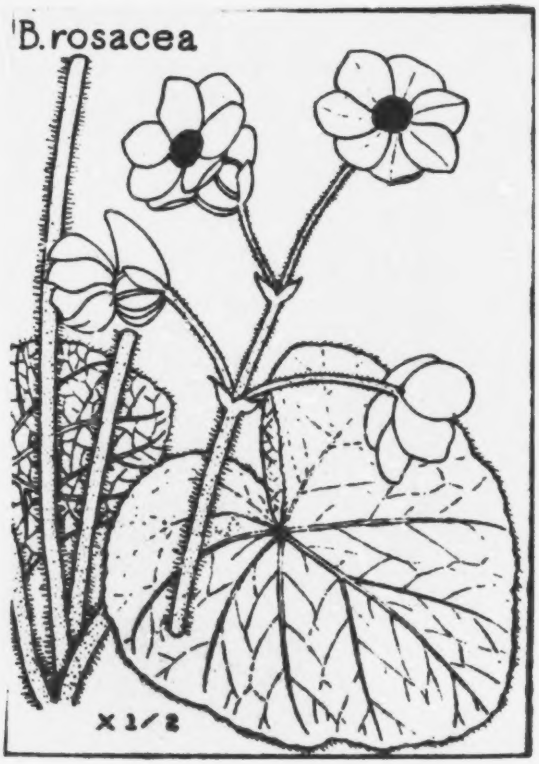
8.25, *B. archboldiana*; 8.26, *B. aliciae*; 8.27, *B. wilsonii*; 8.28, *B. polypetala*.


PLANTS OF ECUADOR

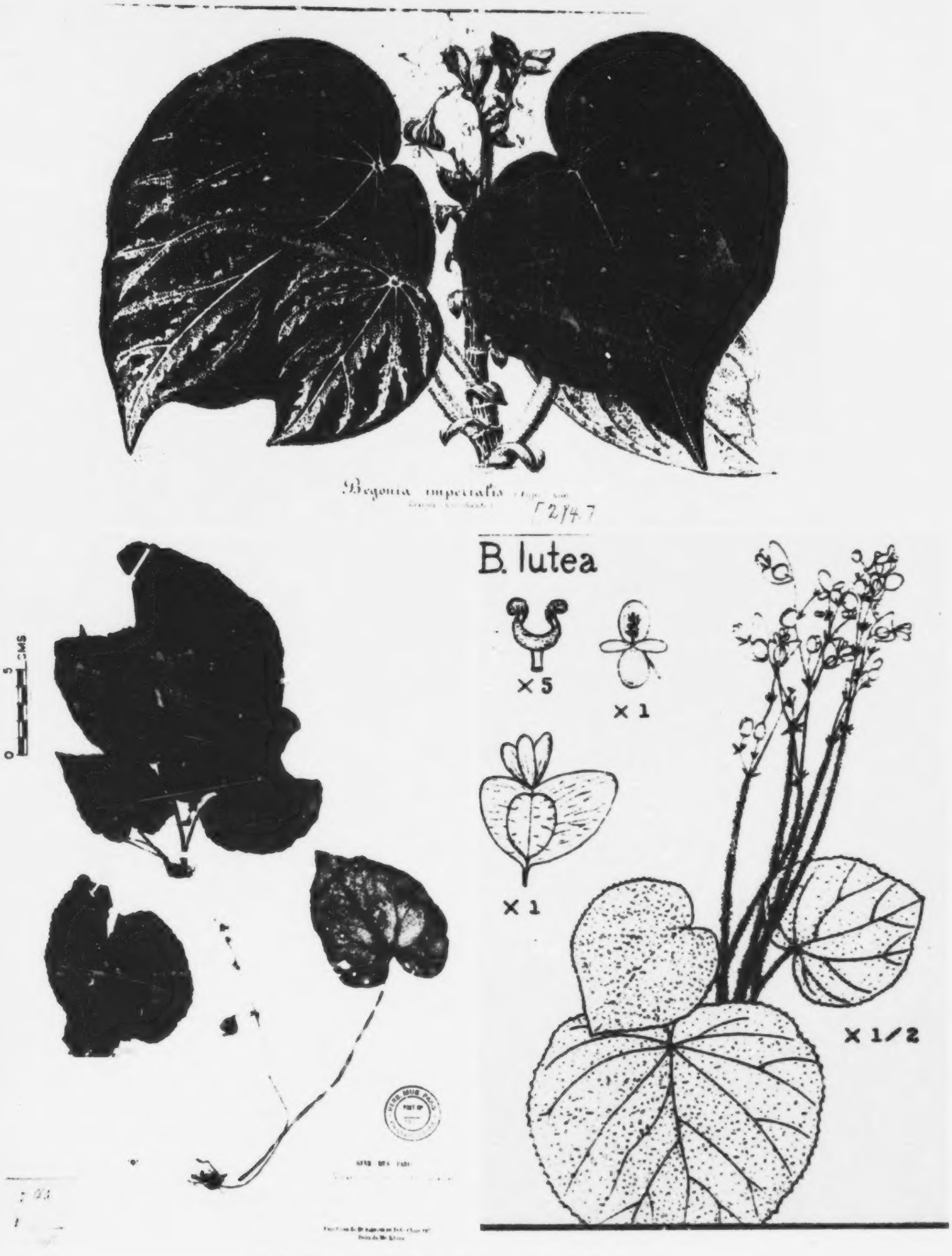
8.29, *B. aequatorialis;* 8.30, *B. rubricaulis;* 8.31, *B. gracillima.*



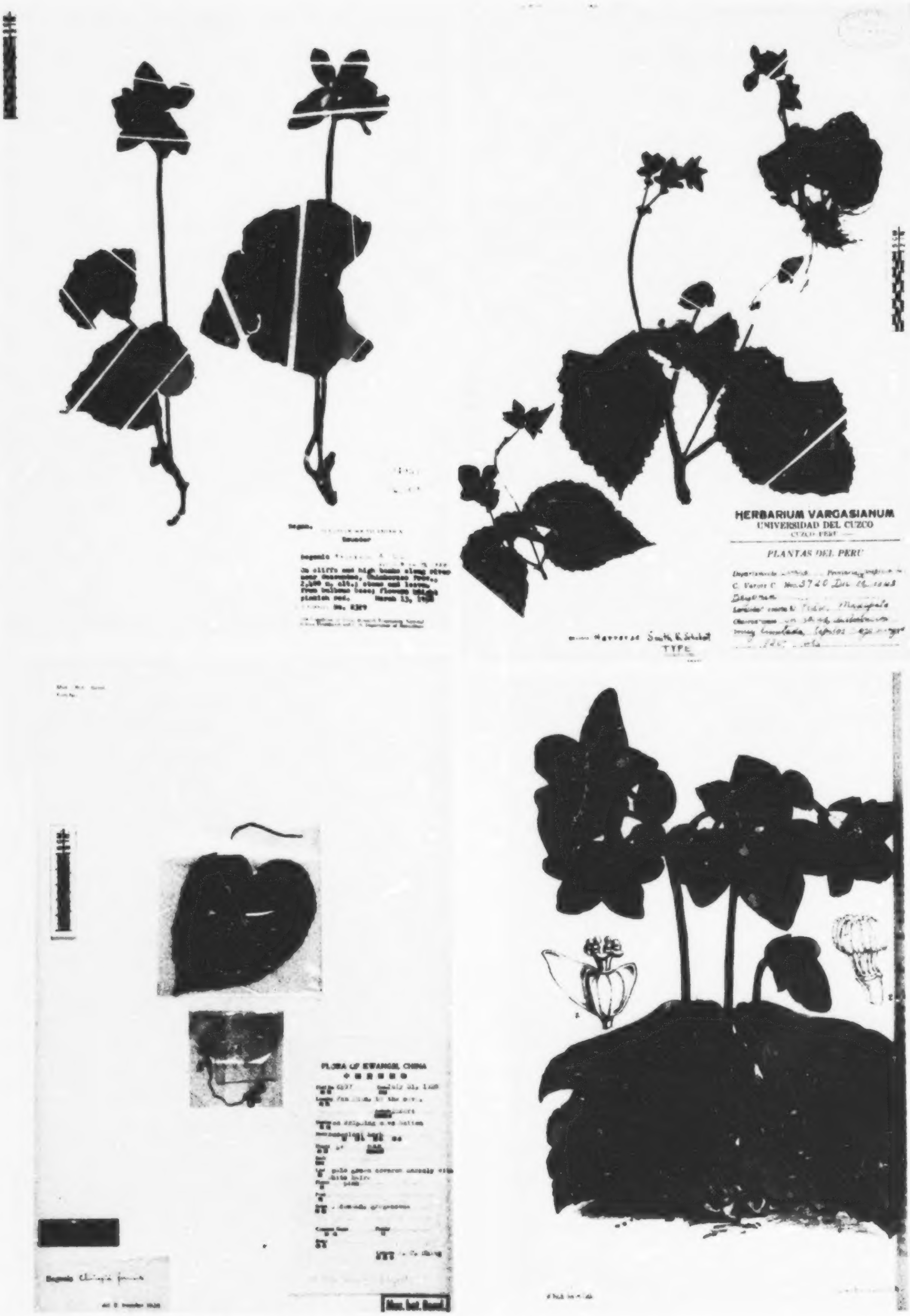



B.rosacea
X 1/2

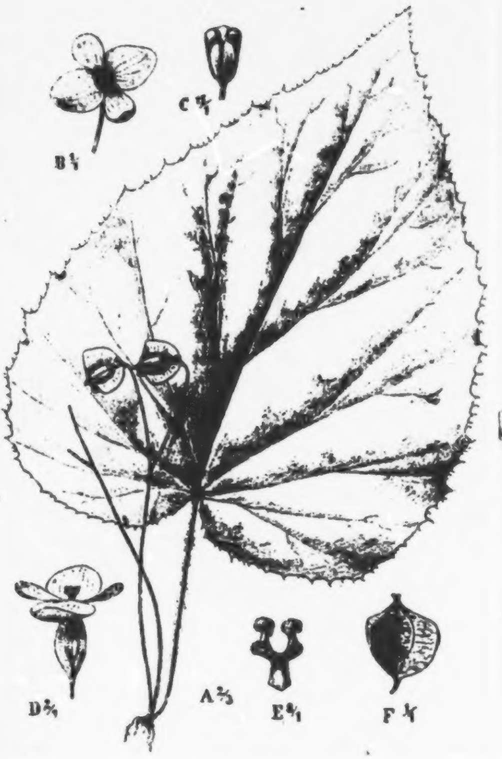
8.32, *B. tenuicaulis;* 8.33, *B. pleiopetala;* 8.34, *B. rosacea.*

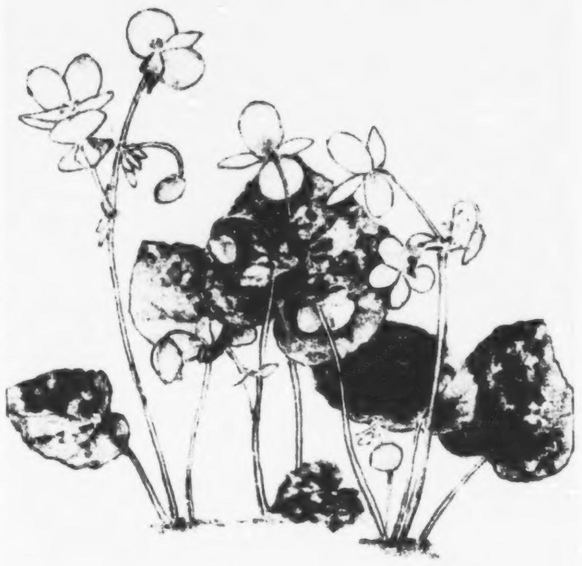

Begonia imperialis
[2/4.7]
0 5 CMS
B. lutea
×5
×1
×1
×1/2

8.35, *B. imperialis;* 8.36, *B. harmandii;* 8.37, *B. lutea.*

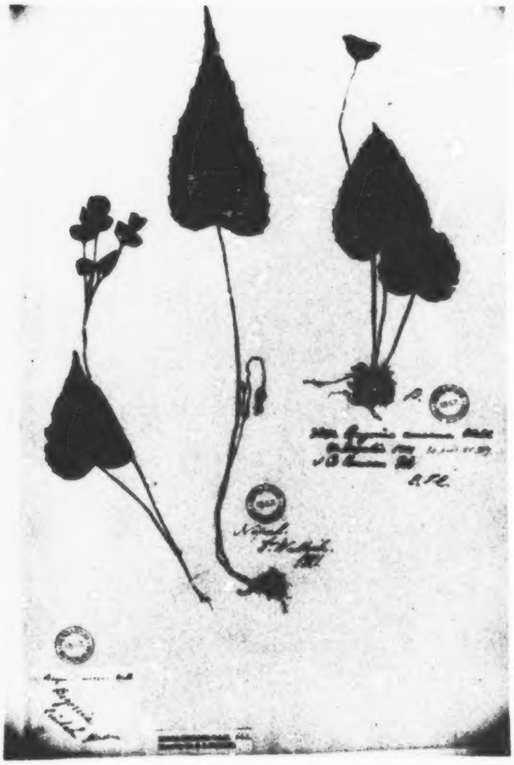

HERBARIUM VARGASIANUM
UNIVERSIDAD DEL CUZCO
CUZCO PERU
PLANTAS DEL PERU
TYPE
FLORA OF KWANGSI CHINA

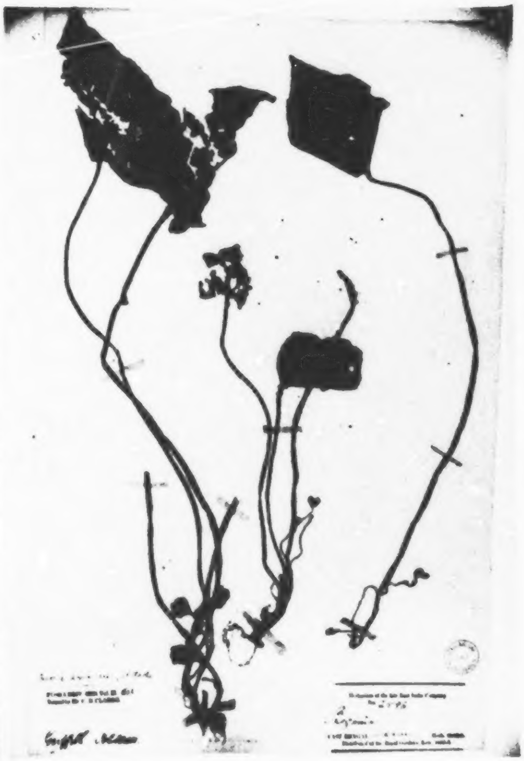
8.38, *B. froebelii;* 8.39, *B. herrerae;* 8.40, *B. chingii;* 8.41, *B. davisii.*


B 1/1
C 7/1
A 2/3
D 2/1
E 8/1
F 1/1

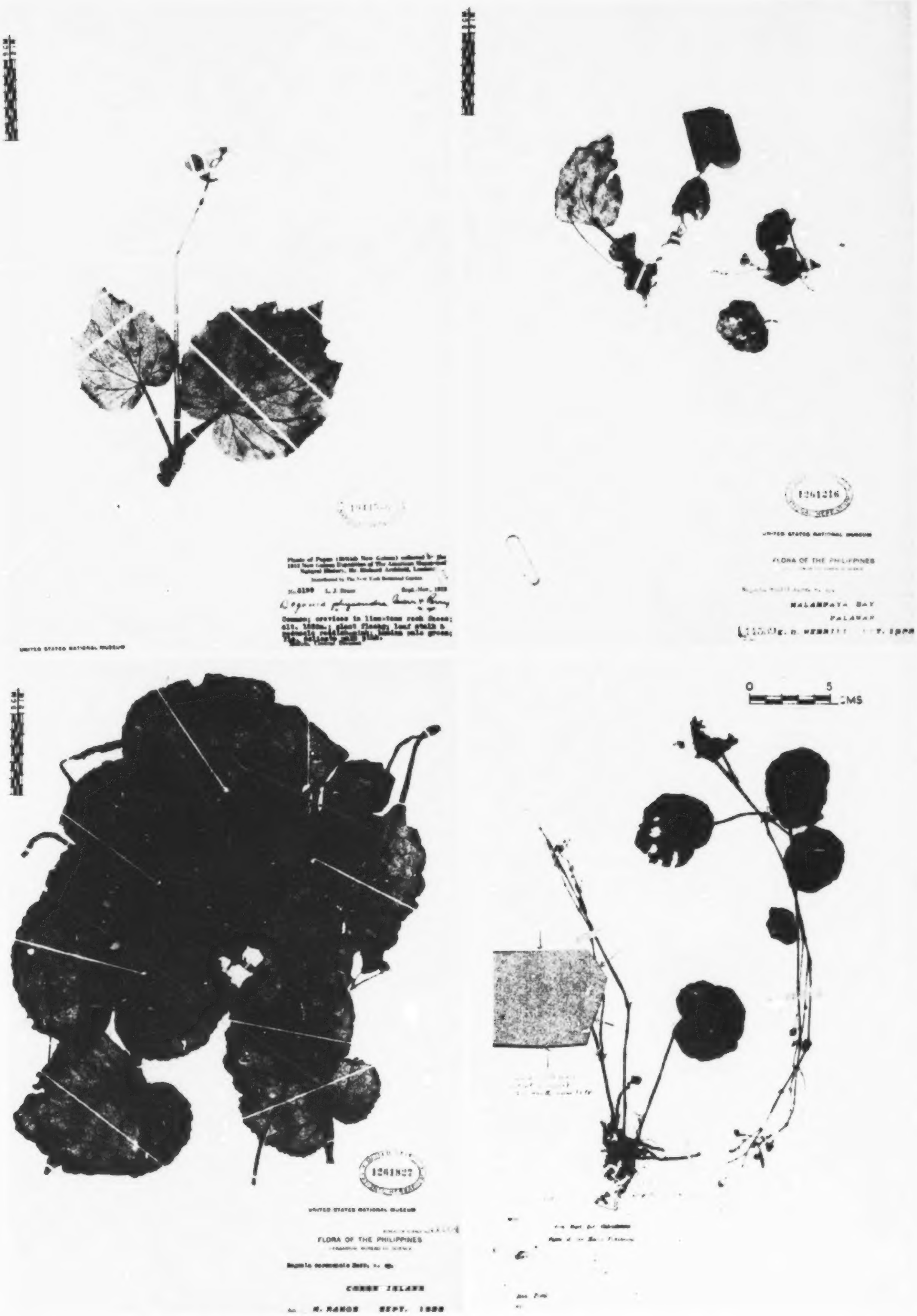


Begonia morelii Irmscher





8.42, *B. minjemensis;* 8.43, *B. morelii;* 8.44, *B. dioica;* 8.45, *B. tessaricarpa.*


UNITED STATES NATIONAL MUSEUM
1261216
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
MALAMPAYA BAY
PALAWAN
0
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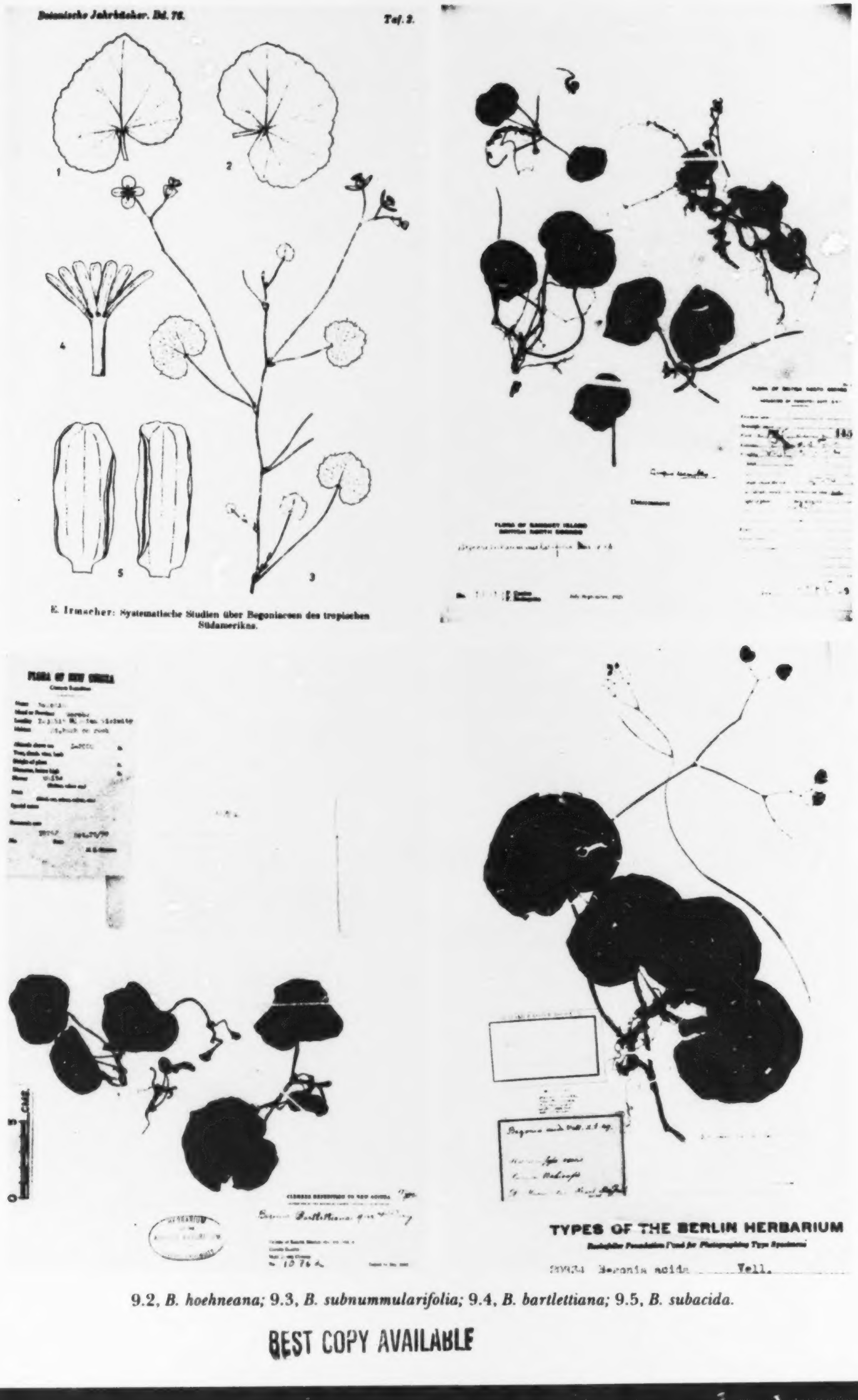
CMS
1261827
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
CORON ISLAND
SEPT.

8.46, *B. physandra*, 8.47, *B. woodii*; 8.48, *B. coronensis*; 9.1, *B. thaipingensis*.


Botanische Jahrbücher. Bd. 76.
Taf. 2.
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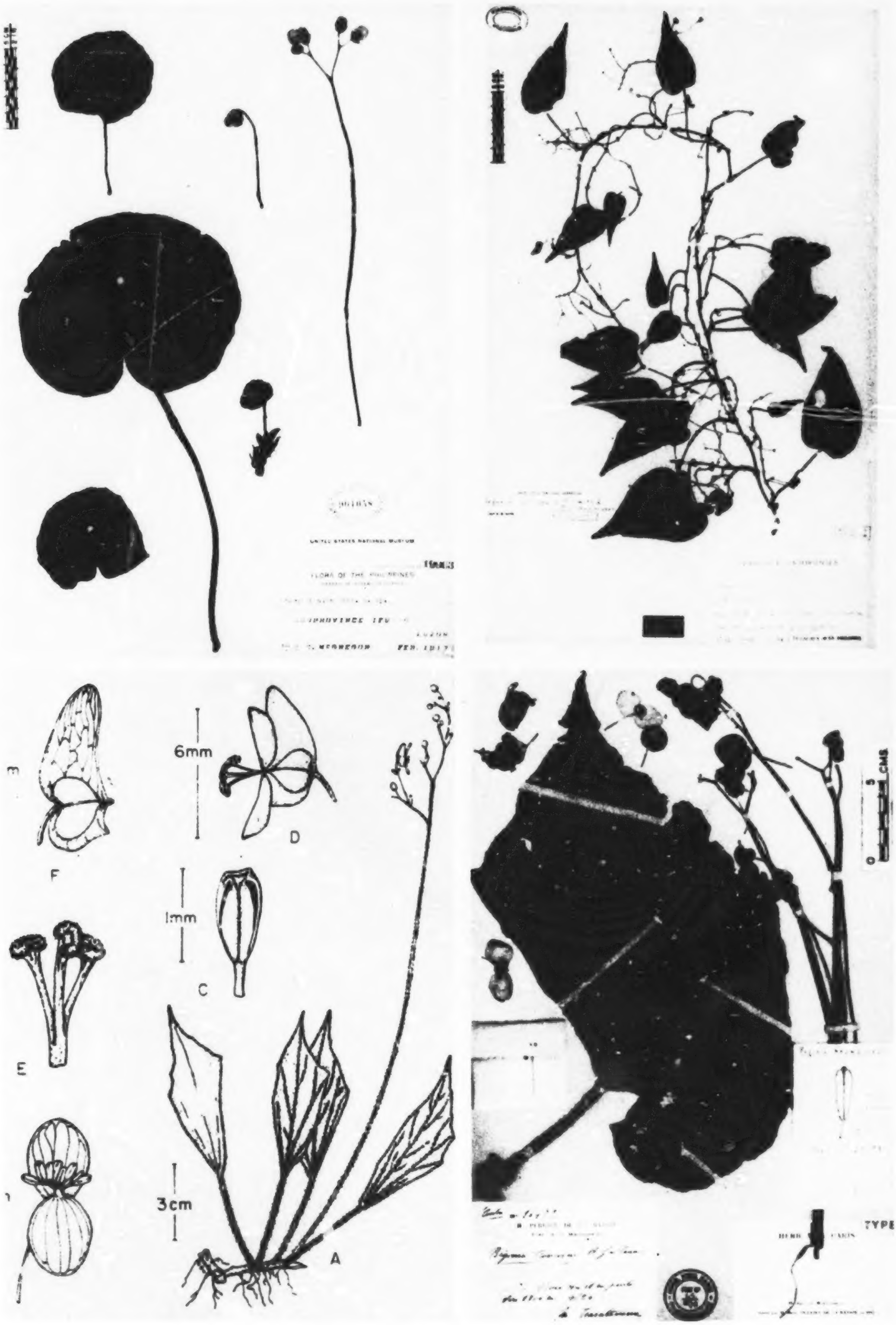
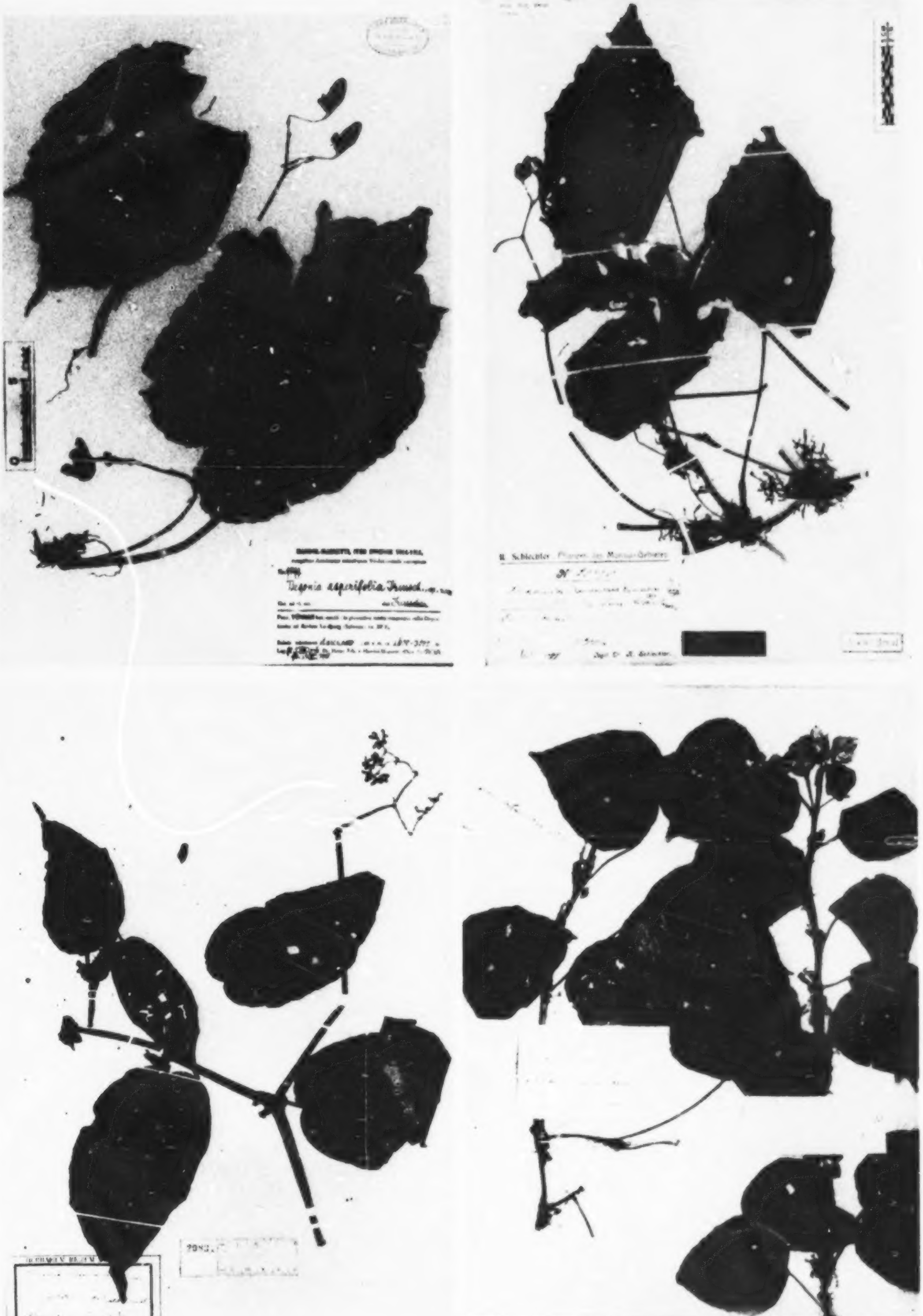
E. Irmscher: Systematische Studien über Begoniaceen des tropischen Südamerikas.
FLORA OF NEW GUINEA
TYPES OF THE BERLIN HERBARIUM
Rockefeller Foundation Fund for Photographing Type Specimens
20934 Begonia acida Vell.

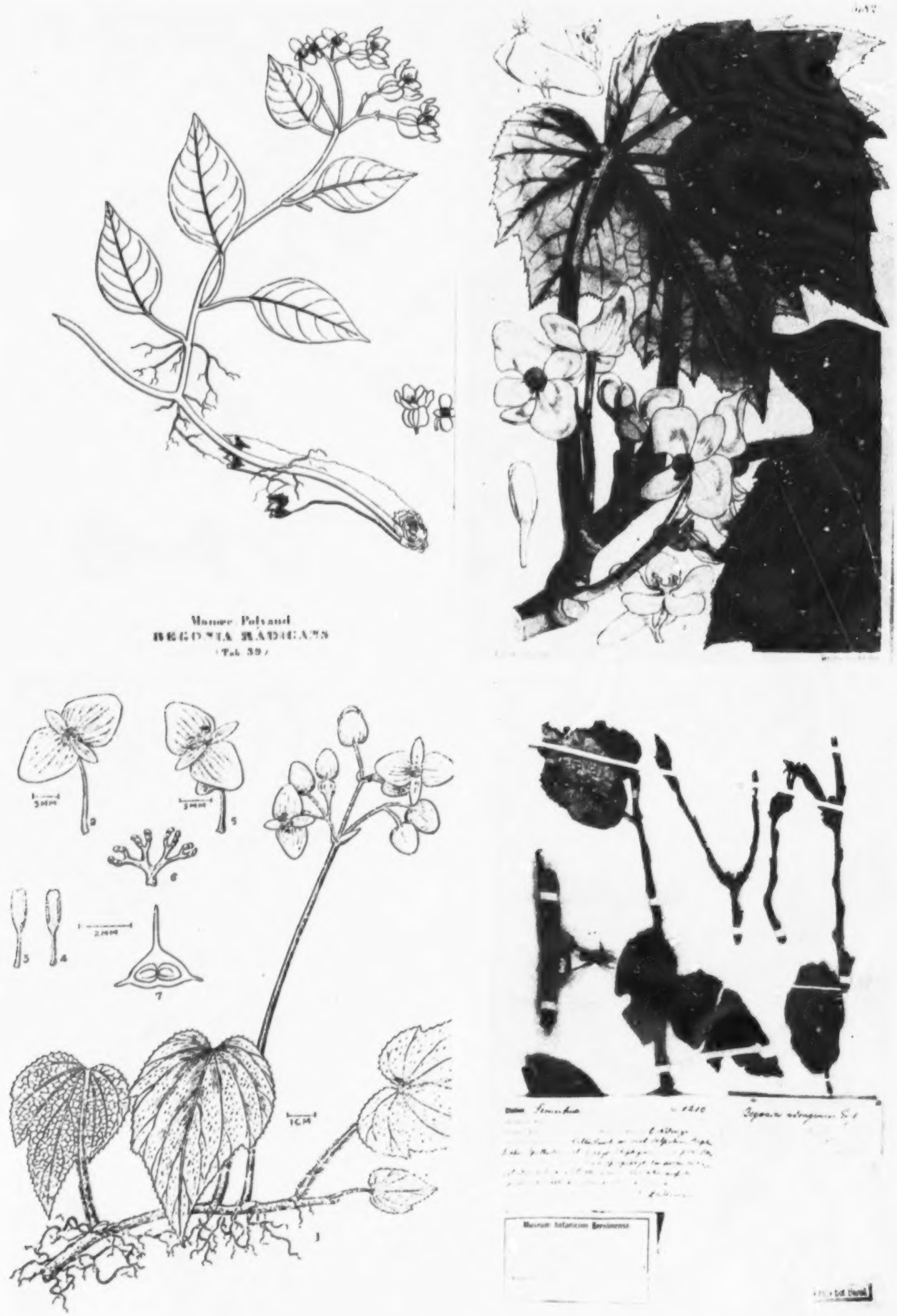
9.2, *B. hoehneana;* 9.3, *B. subnummularifolia;* 9.4, *B. bartlettiana;* 9.5, *B. subacida.*


UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
6mm
D
F
1mm
C
E
3cm
A
CMS
TYPE

9.6, *B. alba;* 9.7, *B. secunda;* 9.8, *B. buseyi;* 9.9, *B. francoisii.*


UNITED STATES NATIONAL MUSEUM

9.10, *B. asperifolia;* 9.11, *B. kaniensis;* 9.12, *B. epibaterium;* 9.13, *B. solananthera.*


5657
Monœcie Polyand.
BEGONIA RADICANS
(Tab. 39)
3 MM
3 MM
2 MM
1 CM
1
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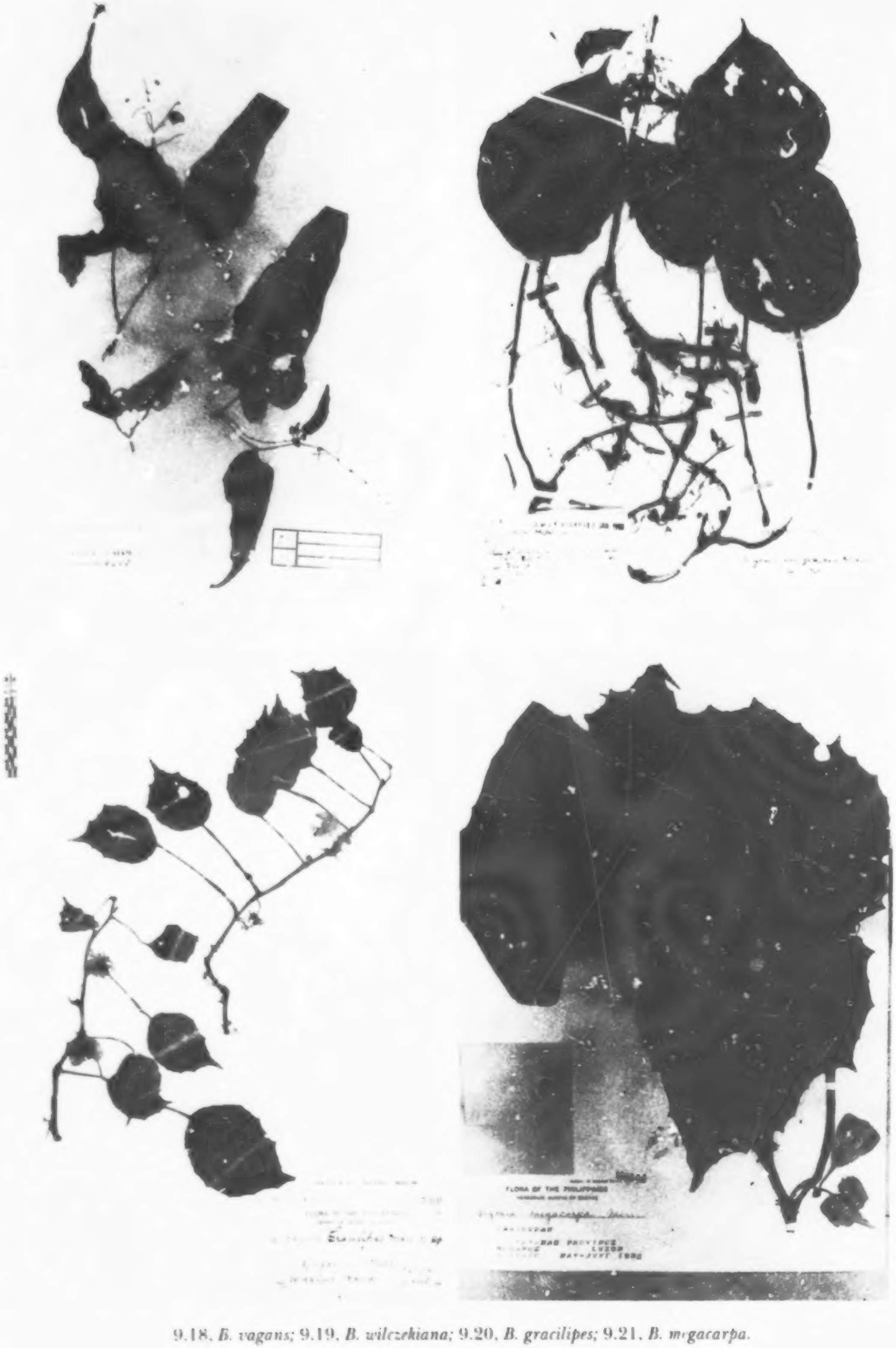
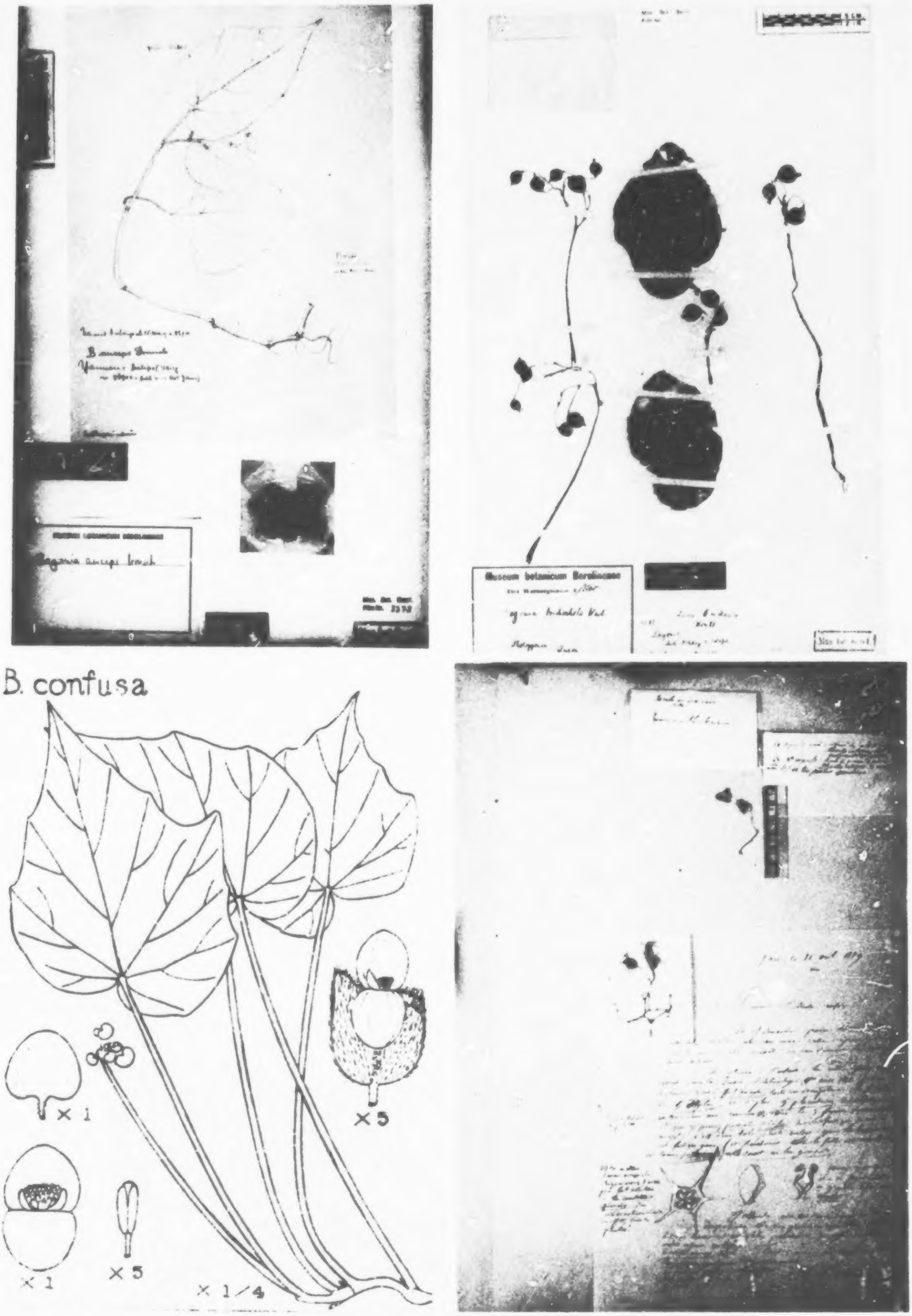
3
4
5
6
7
Museum botanicum Berolinense

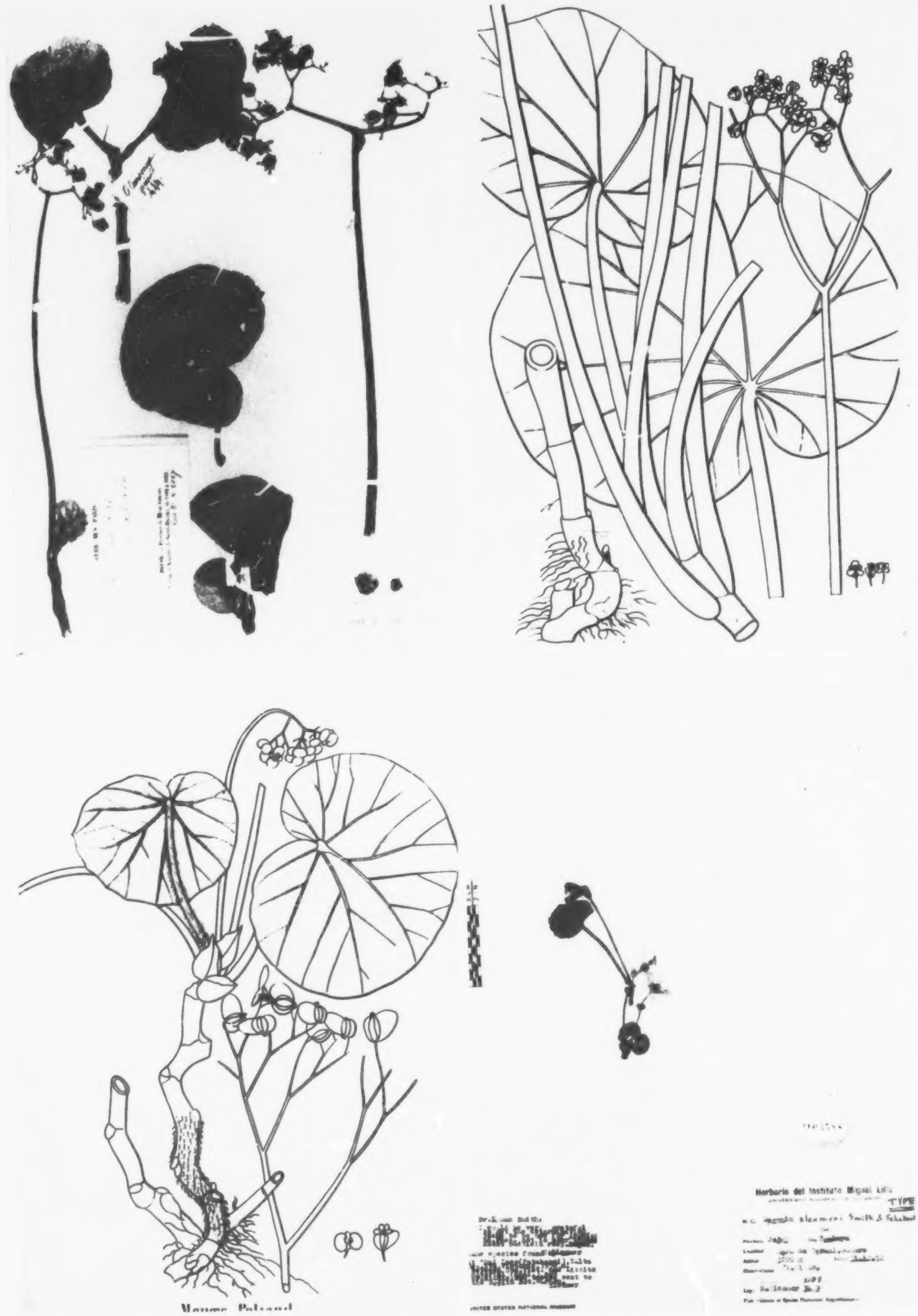
9.14, *B. radicans;* 9.15, *B. bowringiana;* 9.16, *B. houttuynioides;* 9.17, *B. ndongensis.*


FLORA OF THE PHILIPPINES
PROVINCE
LUZON

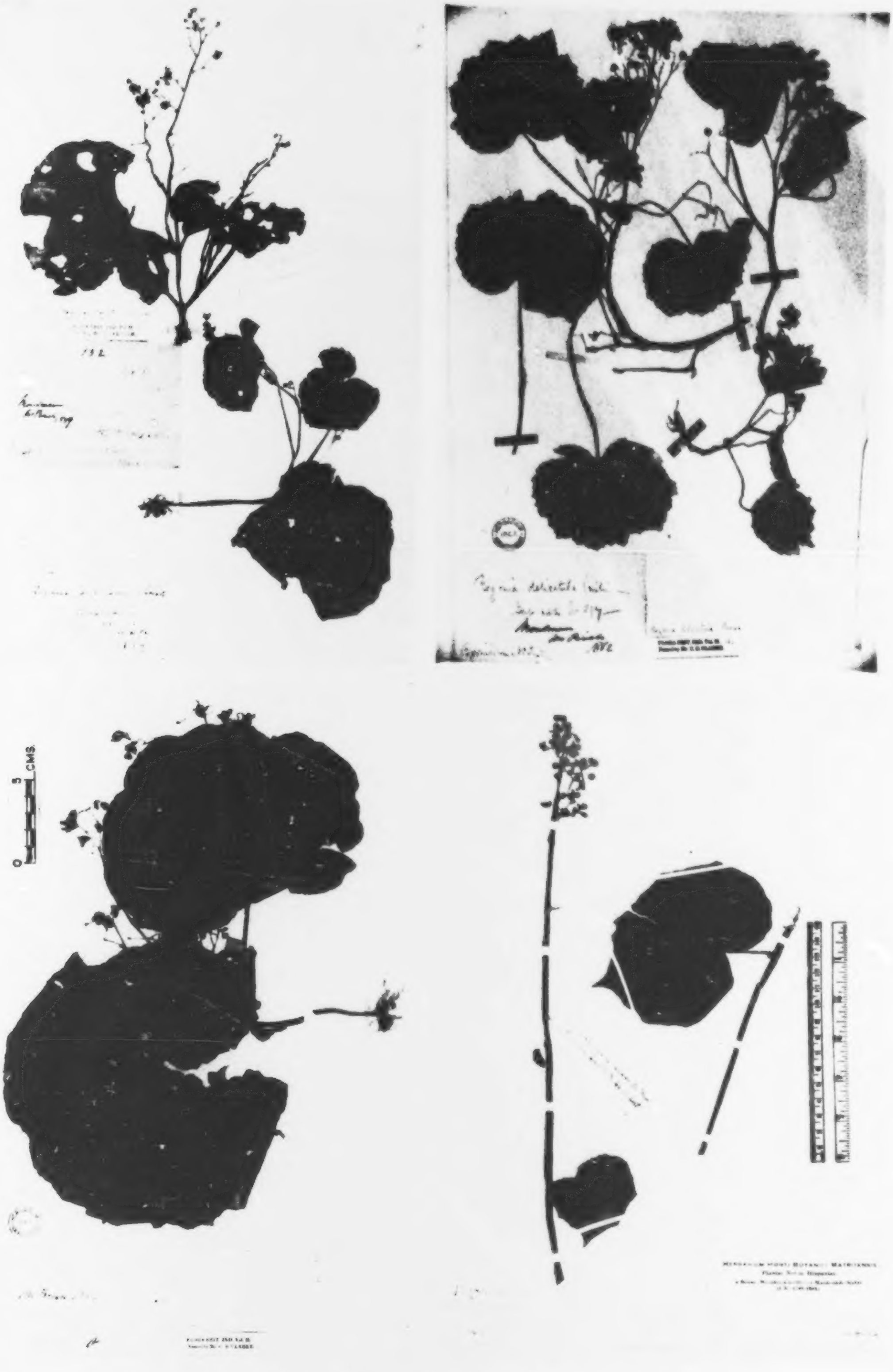
9.18. *B. vagans;* 9.19. *B. wilczekiana;* 9.20. *B. gracilipes;* 9.21. *B. megacarpa.*


Begonia anceps Klotzsch
Museum botanicum Berolinense
B. confusa
× 1
× 5
× 1
× 5
× 1/4

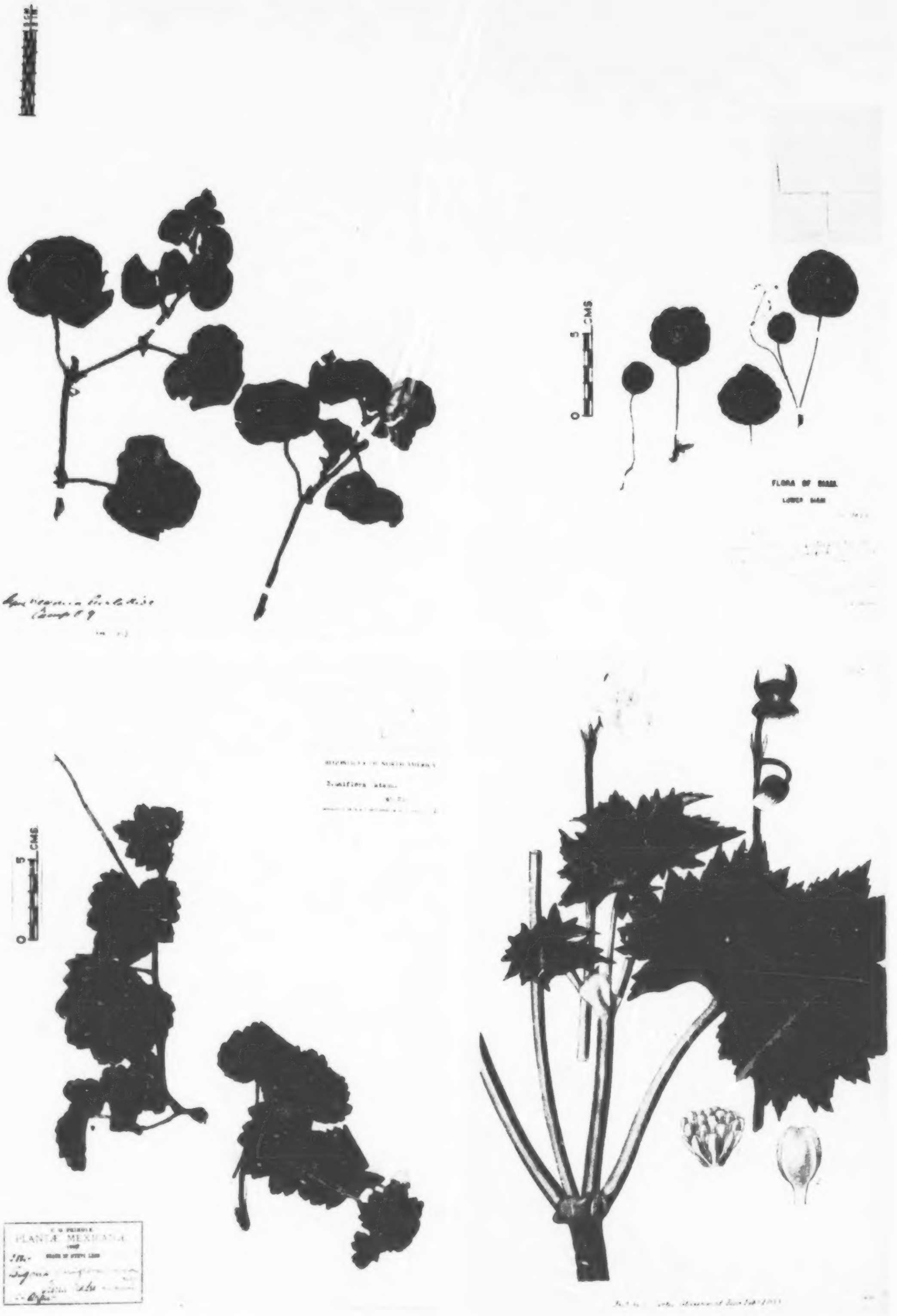
9.22, *B. anceps;* 9.23, *B. trichochila;* 9.24, *B. confusa;* 10.1, *B. schlumbergerana.*


Herbario del Instituto Miguel Lillo
TYPE

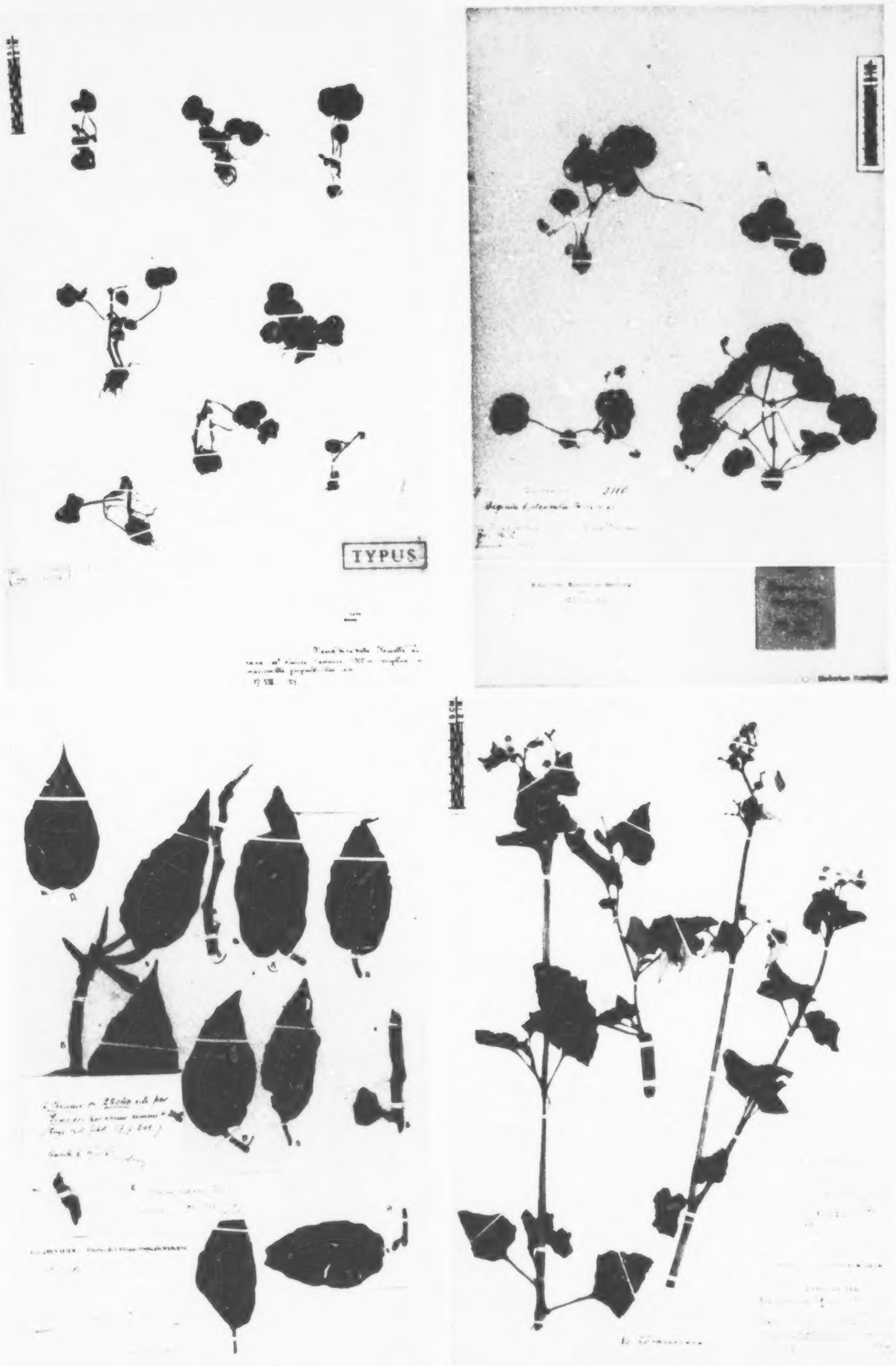
10.2, *B. grisea;* 10.3, *B. acetosa;* 10.4, *B. acida;* 10.5, *B. sleumeri*



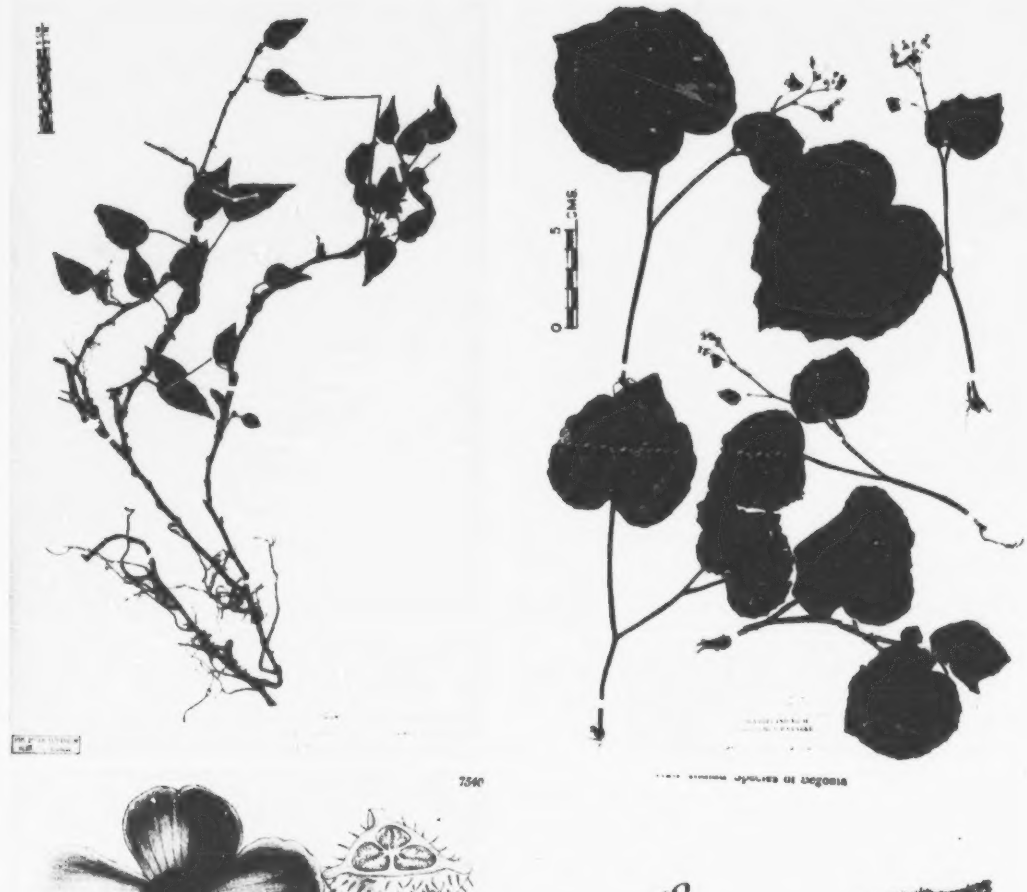
10.6, *B. alicida;* 10.7, *B. delicatula;* 10.8, *B. fibrosa;* 10.9, *B. uruapensis.*


0
5
CMS
FLORA OF SIAM
LOWER SIAM
0
5
CMS
PLANTAE MEXICANAE

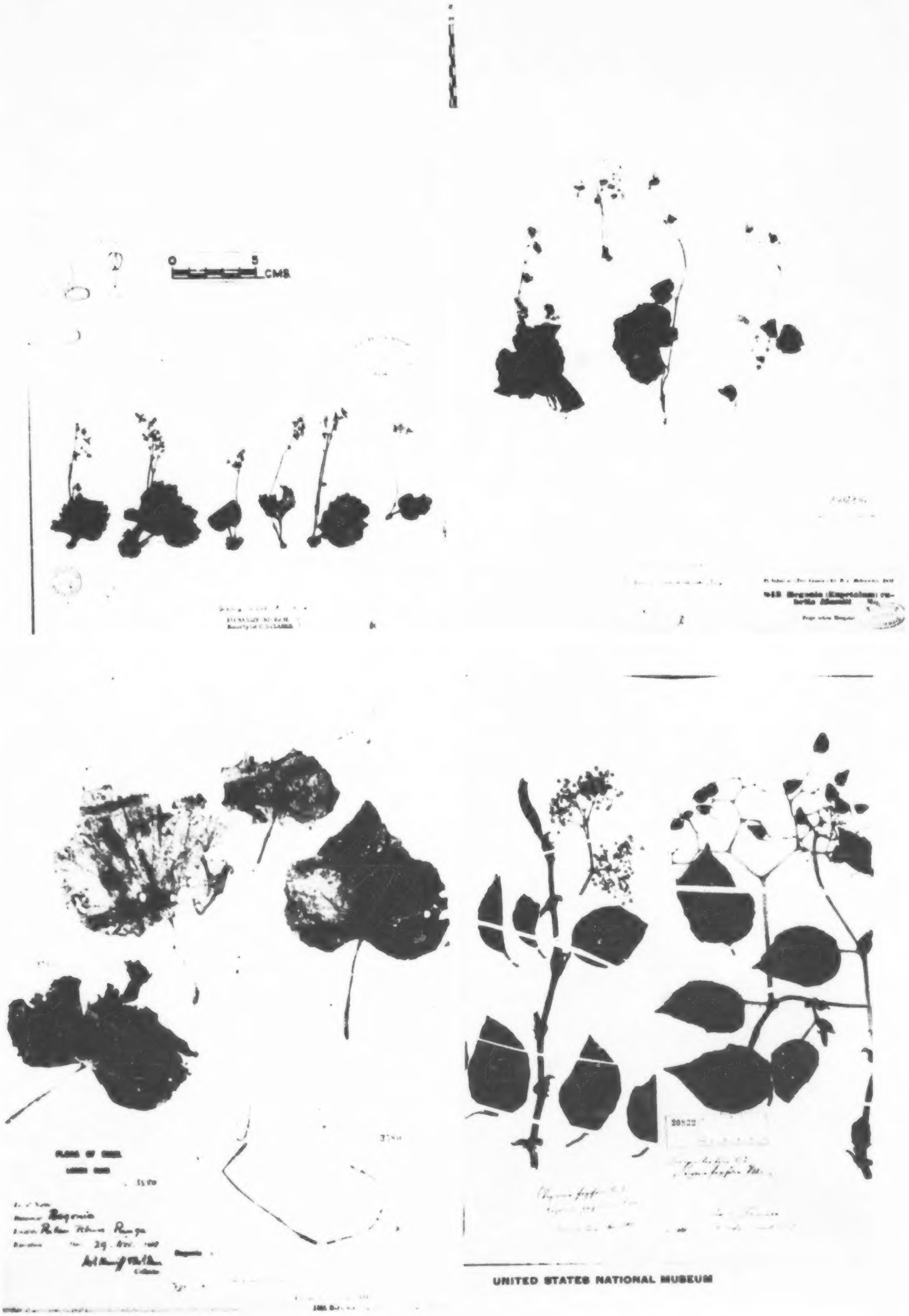
10.10, *Symbegonia hirta;* 10.11, *B. sibthorpioides;* 10.12, *B. uniflora;* 10.13, *B. geraniifolia.*



10.14, B. brachyclada; 10.15, *B. leptophylla;* 11.1, *B. horticola;* 11.2, *B. fischeri.*



11.3, *B. libanensis;* 11.4, *B. martabanica;* 11.5, *B. baumannii;* 11.6, *B. phrixophylla.*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CMS.
UNITED STATES NATIONAL MUSEUM

11.7, *B. triradiata*; 11.8, *B. canarana*; 11.9, *B. cardiophora*; 11.10, *B. fagifolia*.

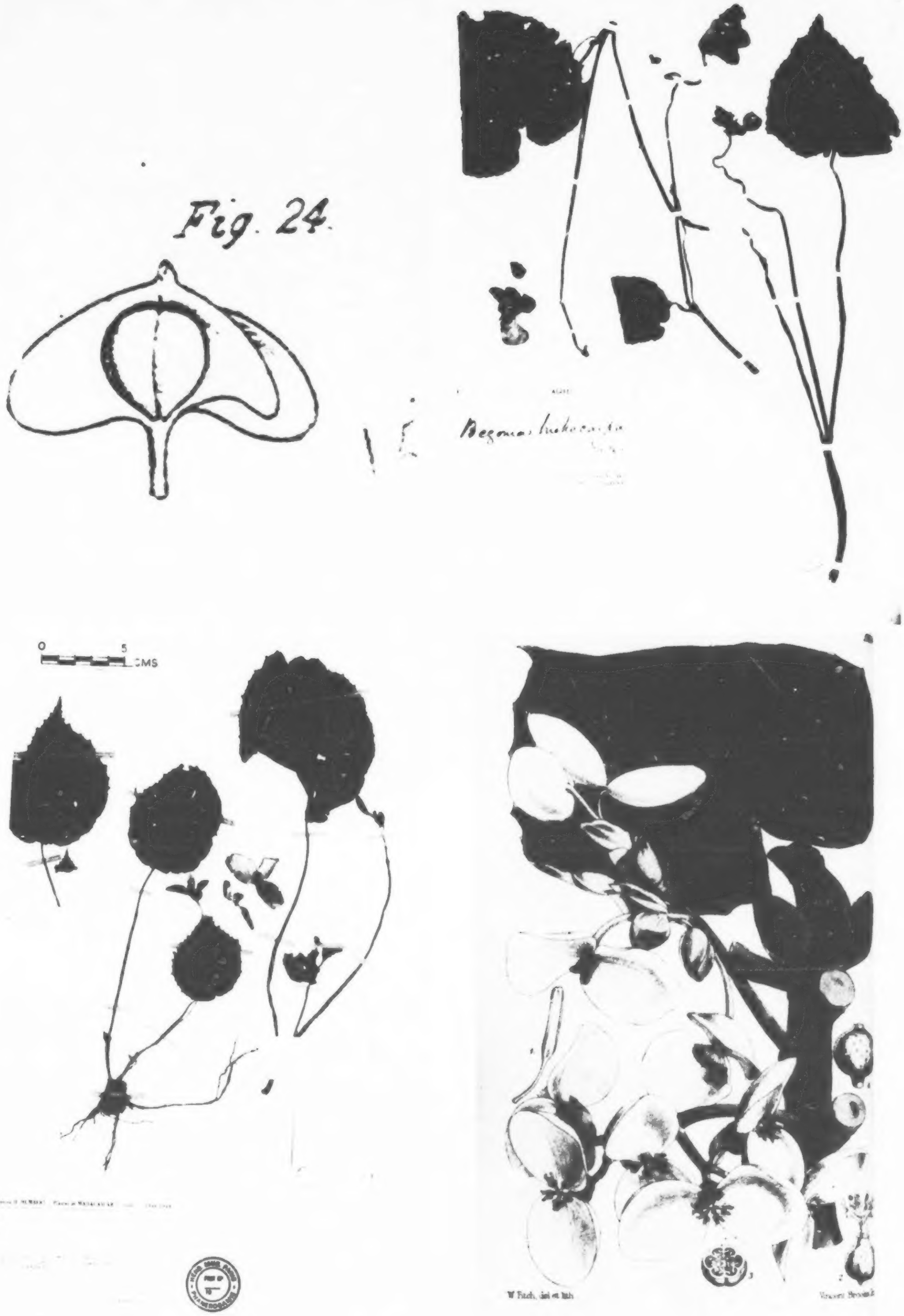
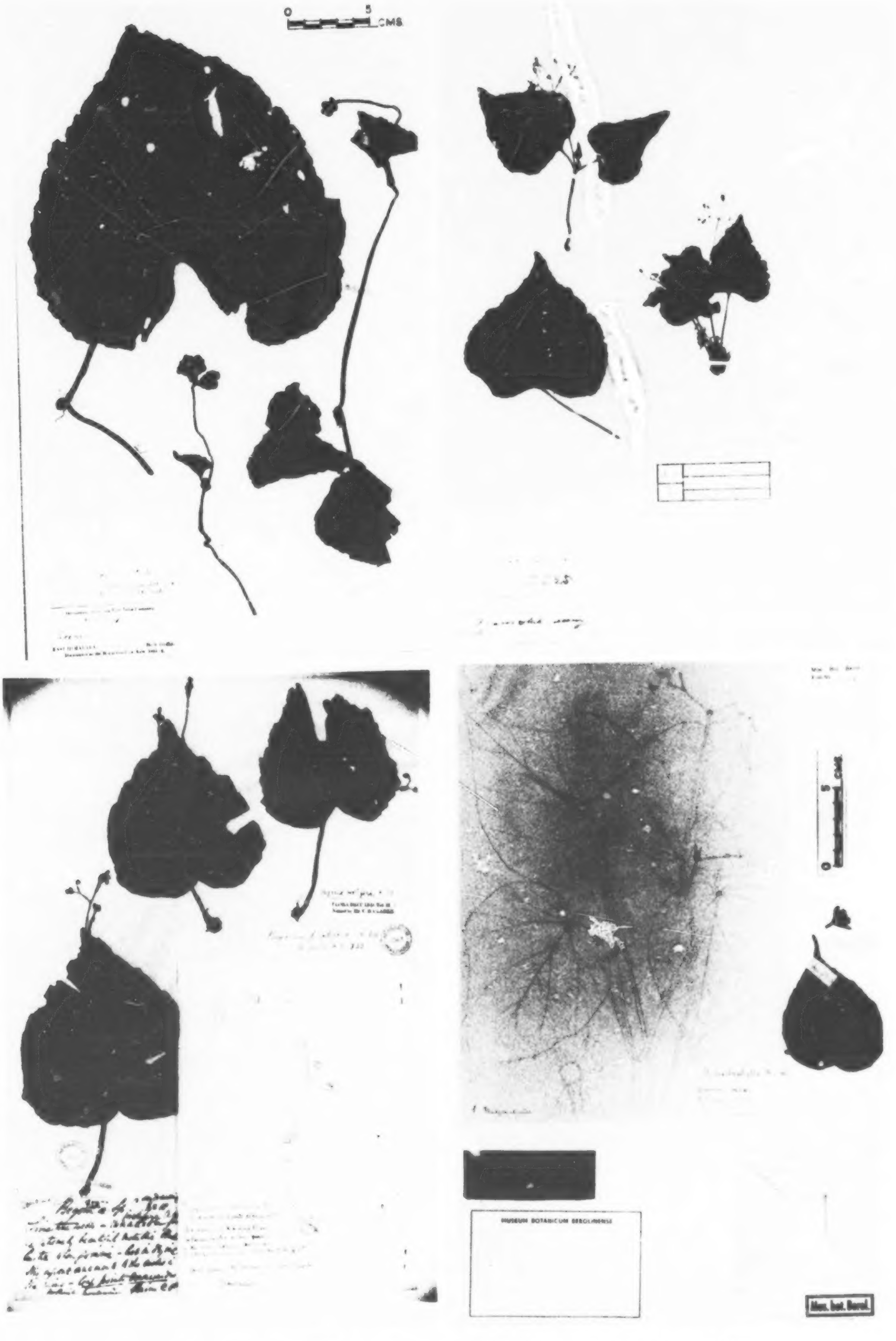
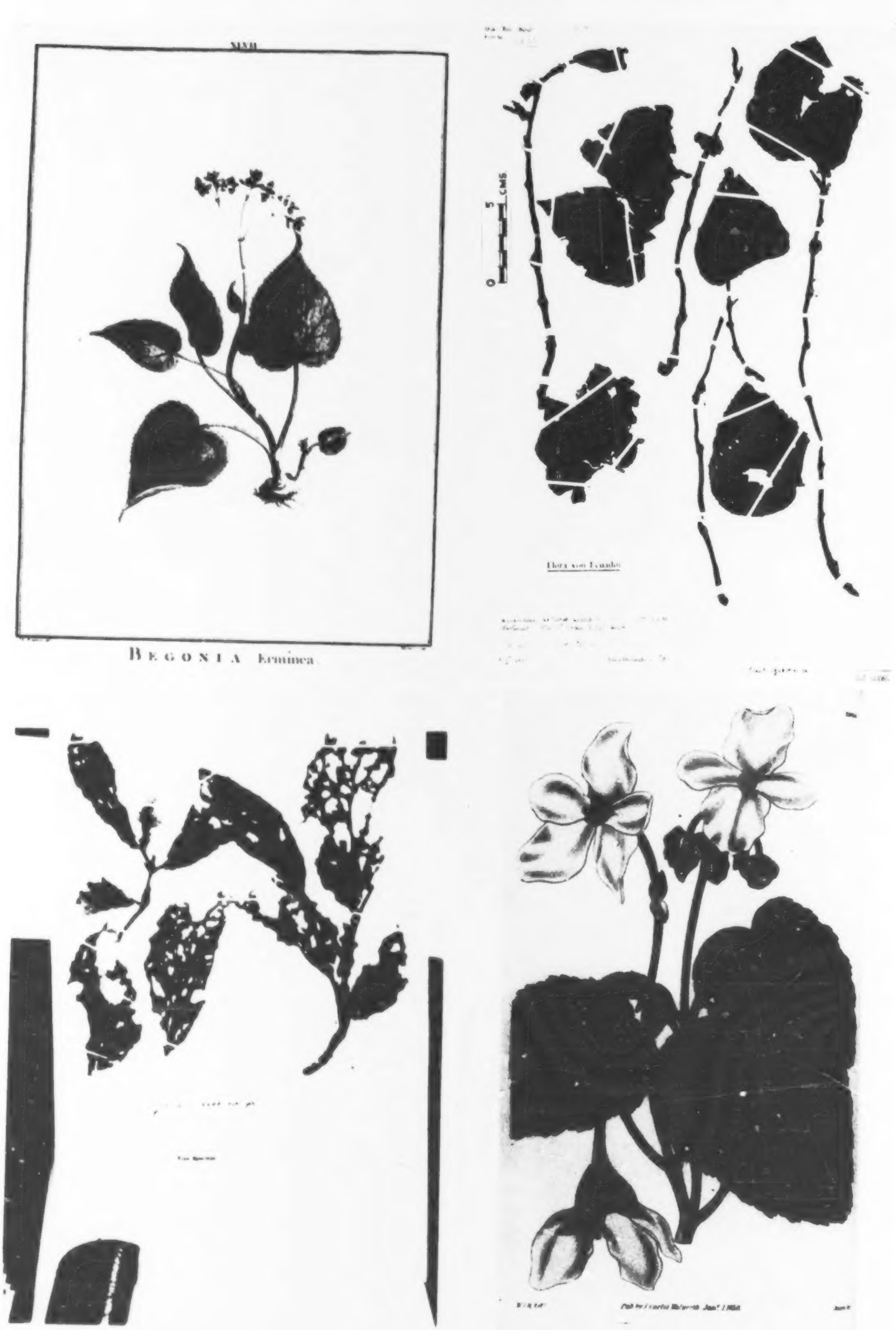


Fig. 24.
Begonia trichocarpa
0 5 CMS
W Fitch, del et lith
Vincent Brooks

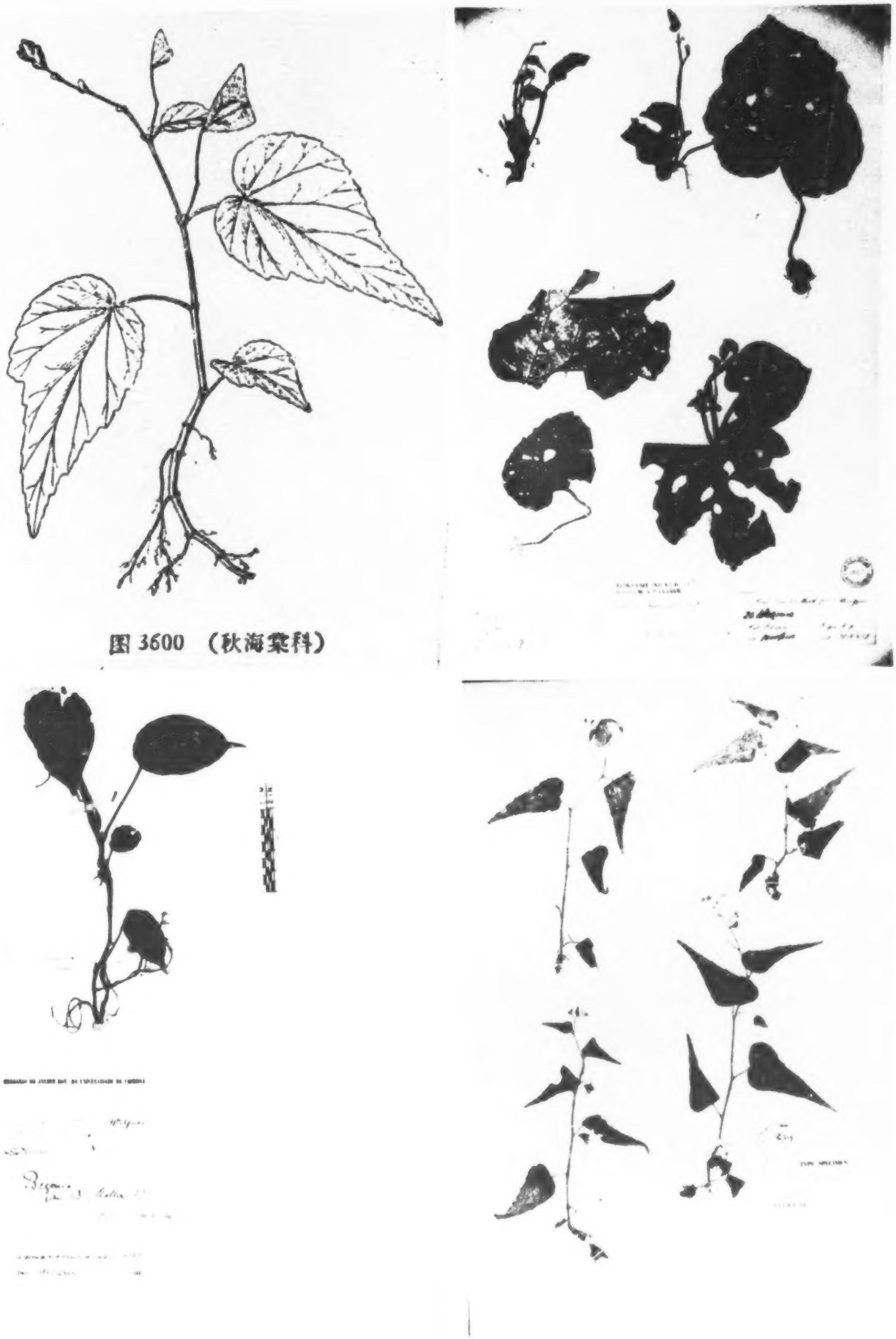
11.11, *B. surculigera;* 11.12, *B. trichocarpa;* 11.13, *B. betsimisaraka;* 11.14, *B. baccata.*


0
5
CMS.
MUSEUM BOTANICUM BEROLINENSE
Mus. bot. Berol.

11.15, *B. satrapis;* 11.16, *B. demissa;* 11.17, *B. prolifera;* 11.18, *B. psilophylla.*


XLVII
BEGONIA Erminea.
5
CMS
0
Flora von Ecuador

11.19, *B. erminea;* 12.1, *B. tiliifolia;* 12.2, *B. pentaphragmifolia;* 12.3, *B. picta.*



12.4, *B. yunnanensis;* 12.5, *B. brevicaulis;* 12.6, *B. macambrarensis;* 12.7, *B. minicarpa.*

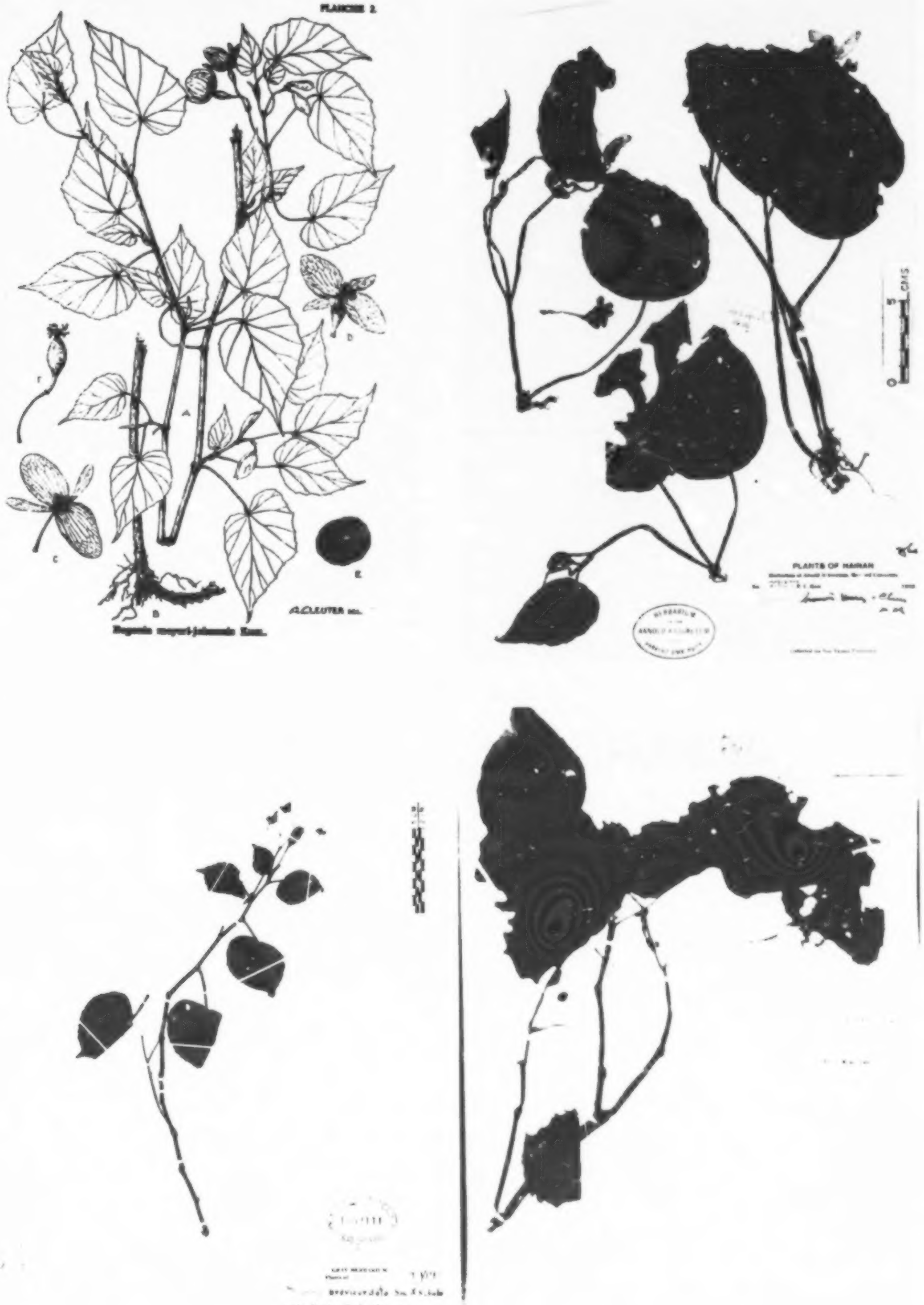
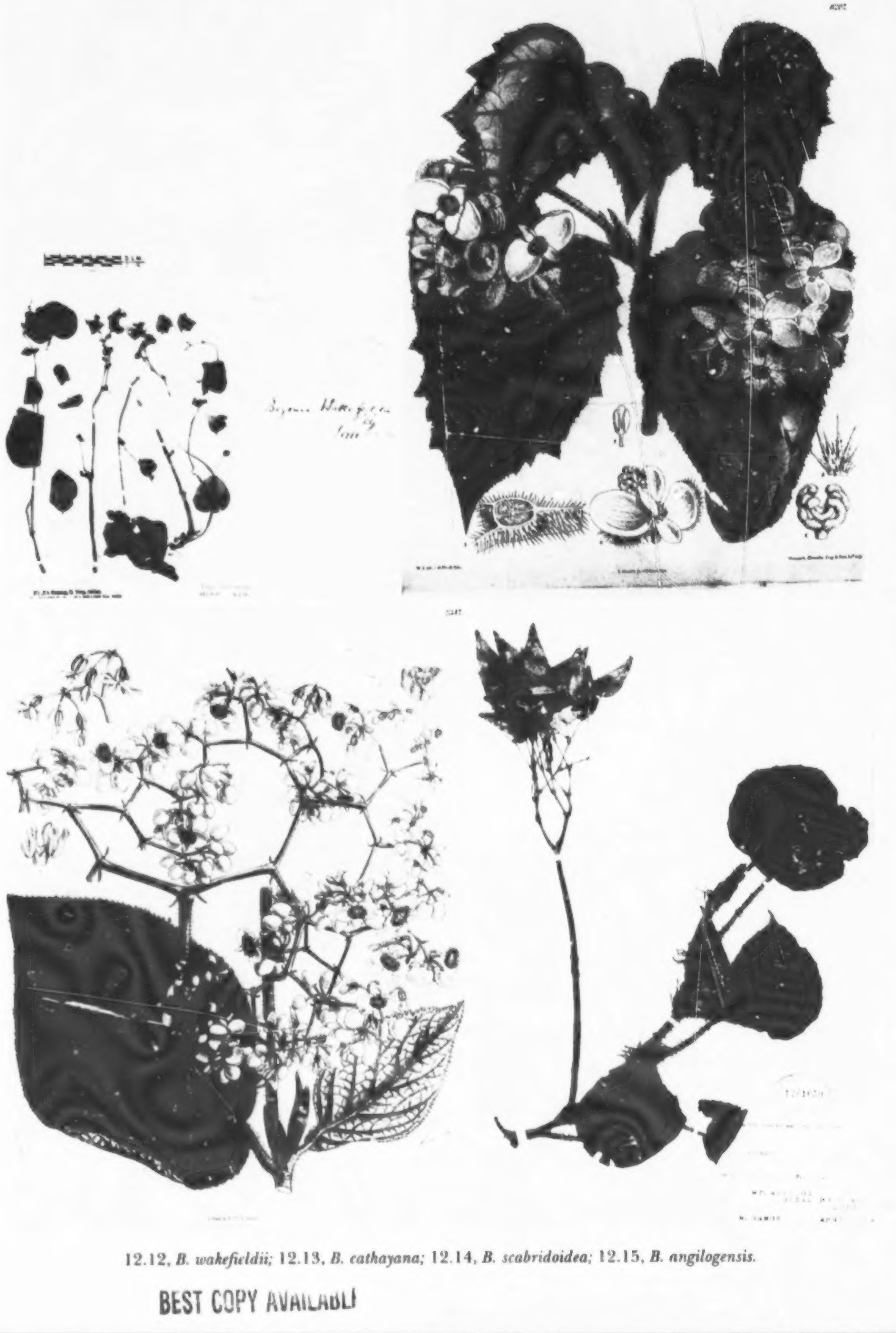
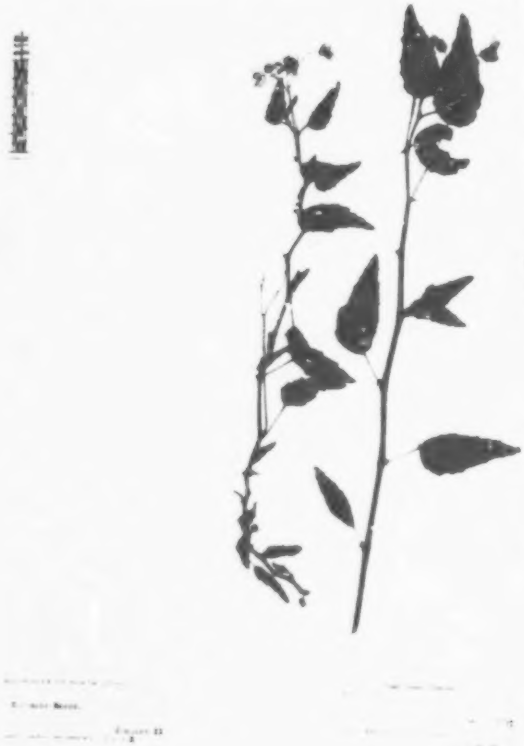


PLANCHE 2.
A
B
C
D
E
F
A.C.LEUTER del.
Begonia meyeri-johannis Engl.
PLANTS OF HAINAN
HERBARIUM
ARNOLD ARBORETUM
HARVARD UNIVERSITY
brevicordata
TED STATES NATIONAL MUSEUM

12.8, *B. meyeri-johannis*; 12.9, *B. howii*; 12.10, *B. brevicordata*; 12.11, *B. axillipara*.



12.12, *B. wakefieldii*; 12.13, *B. cathayana*; 12.14, *B. scabridoidea*; 12.15, *B. angilogensis*.



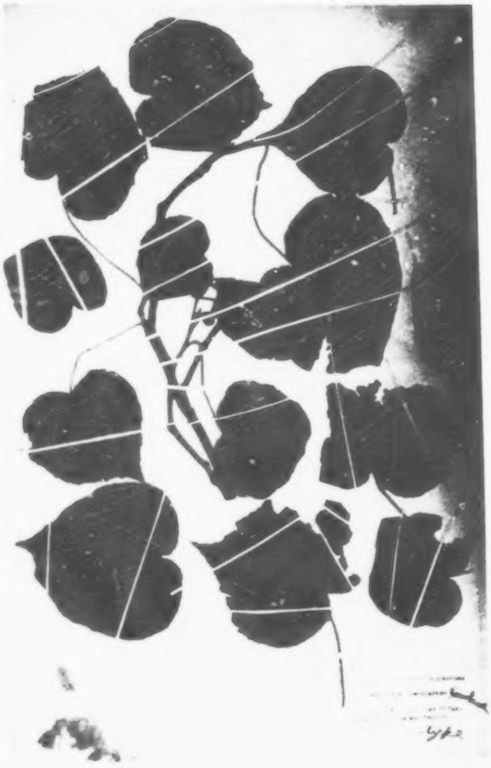
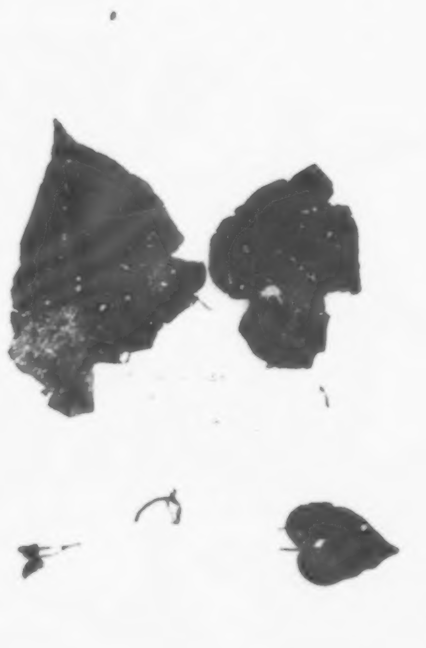
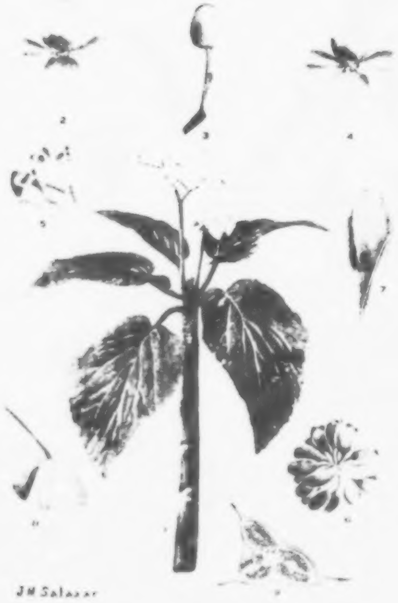
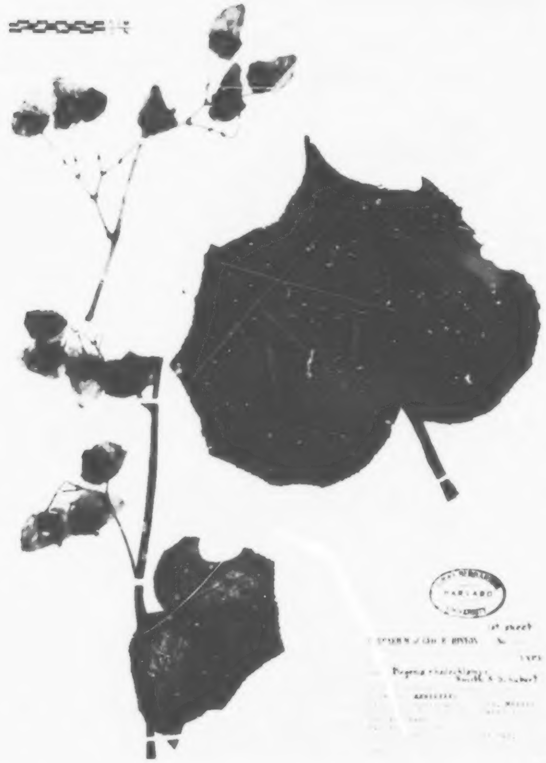


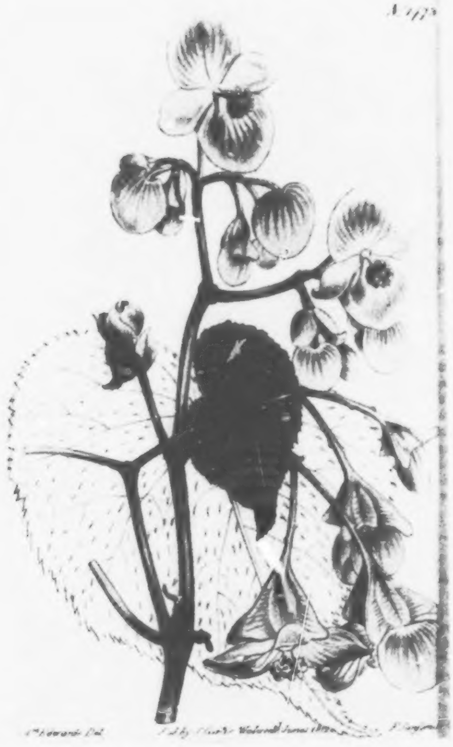
PLATE 573
ADDISONIA

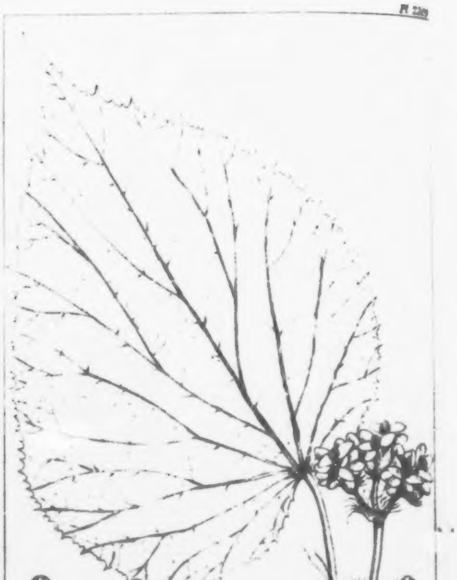


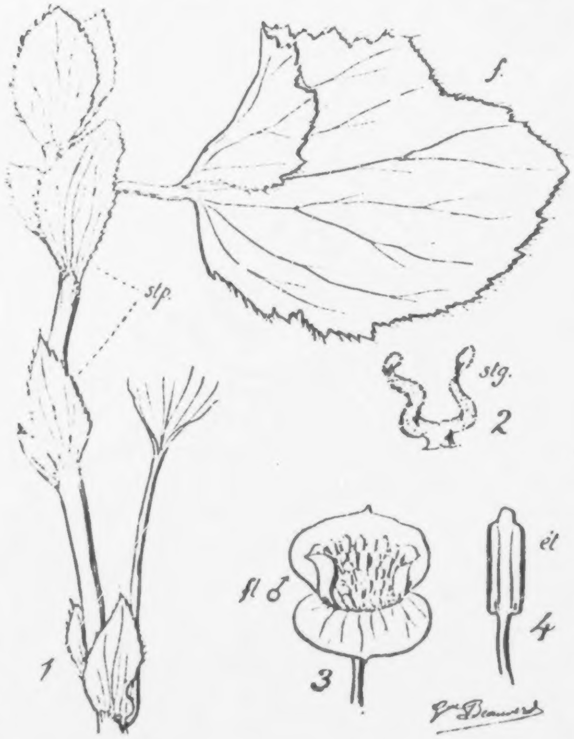

2
3
4
5
7
J M Salazar
BEGONIA WADEI

12.16. *B. cubensis;* 12.17. *B. alice-clarkiae;* 12.18. *B. guttata;* 12.19. *B. wadei.*








f.
stp.
stg.
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fl ♂
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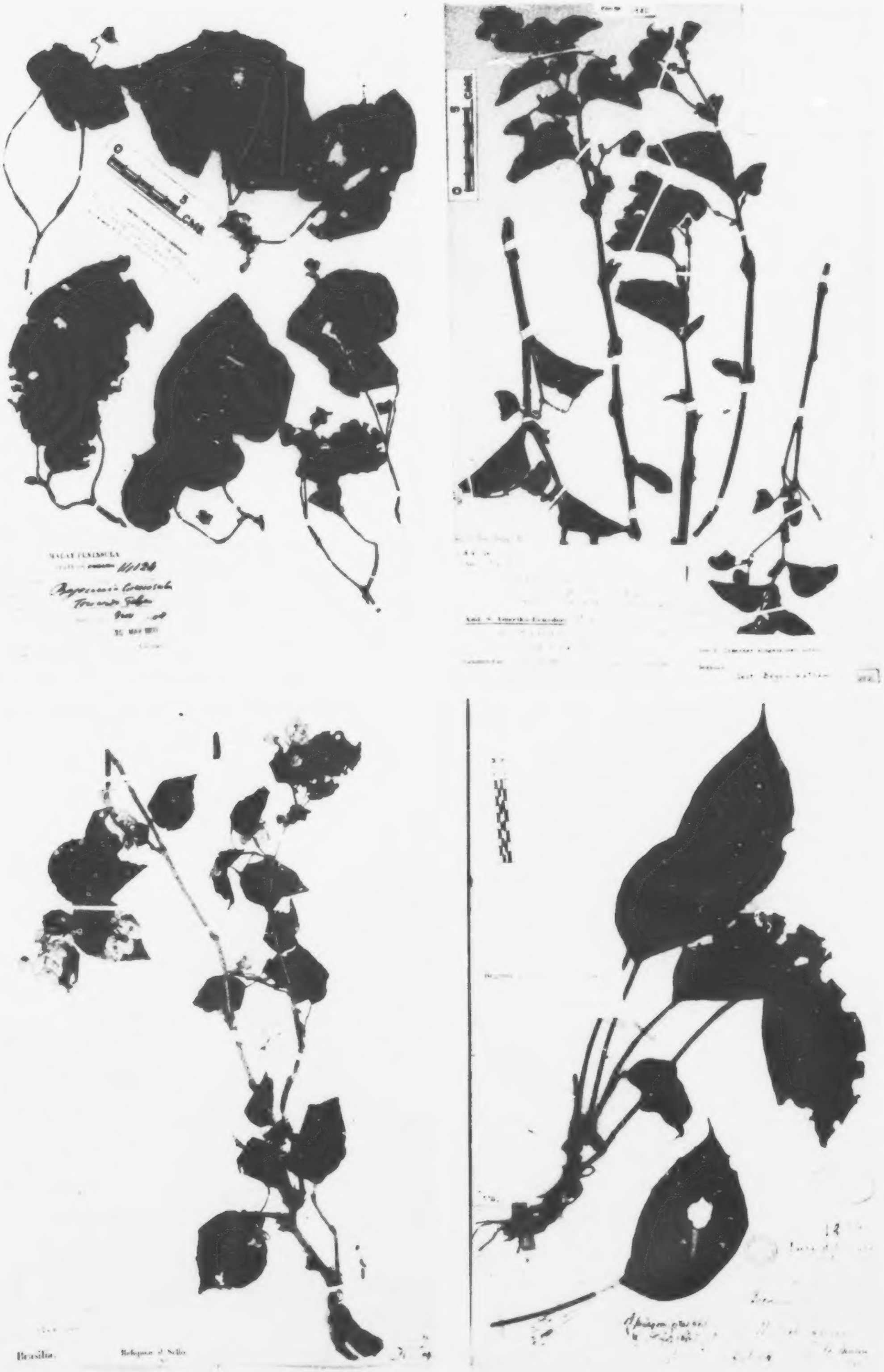
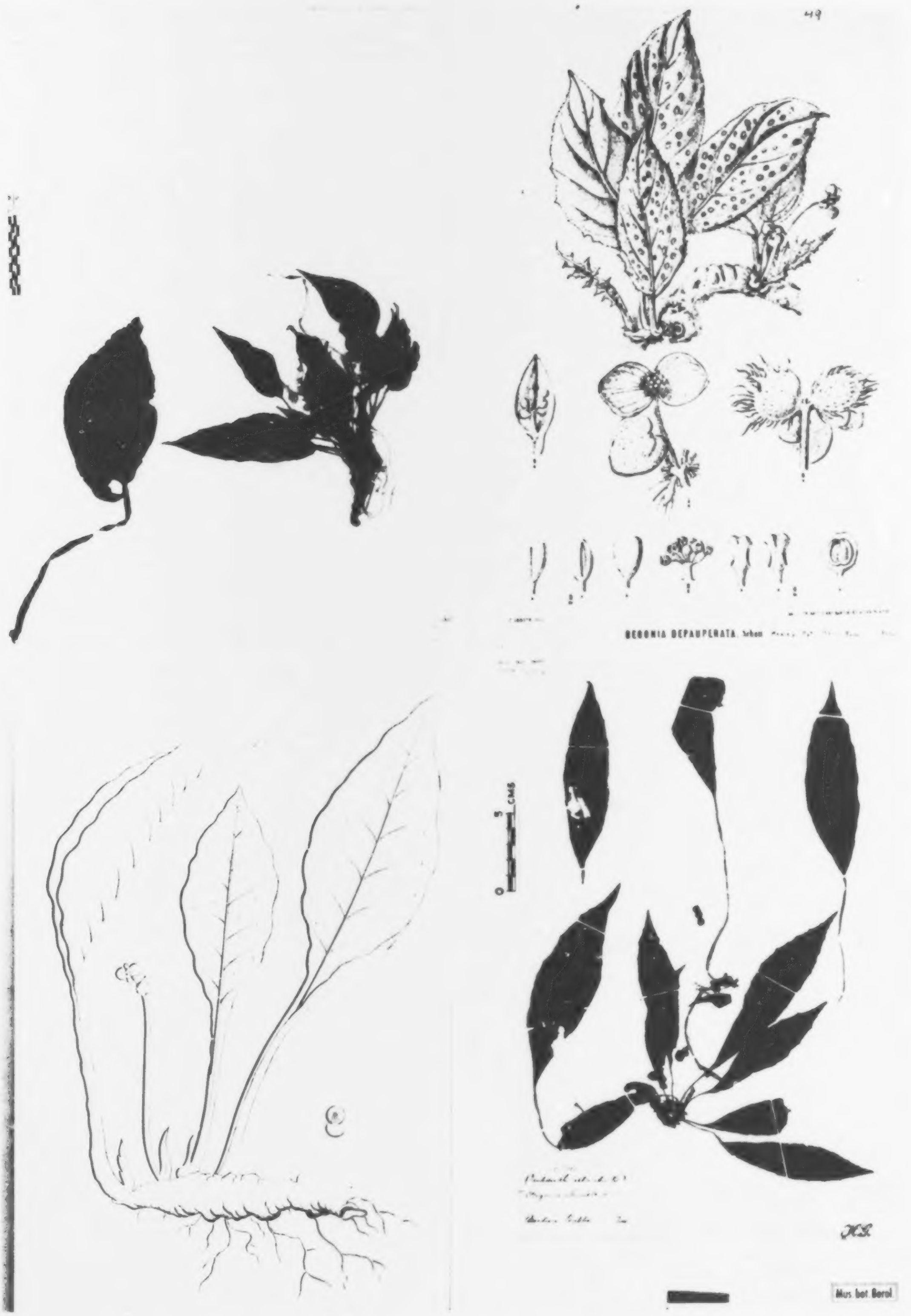
1

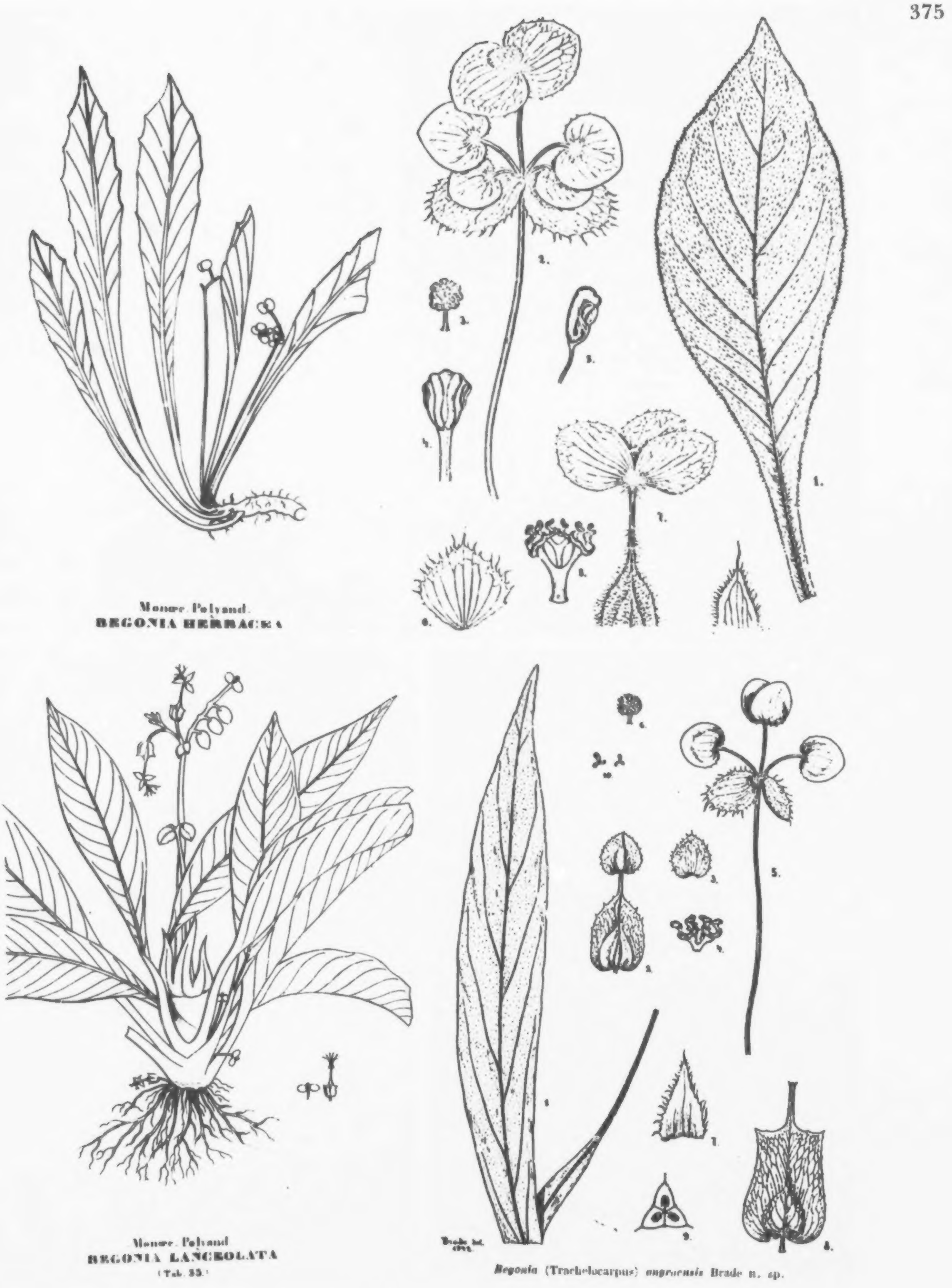
12.20, *B. rhodochlamys;* 12.21, *B. grandis;* 12.22, *B. inostegia;* 12.23, *B. obovatistipula.*


MALAY PENINSULA
Brasilia.
Reliquiae d. Sello

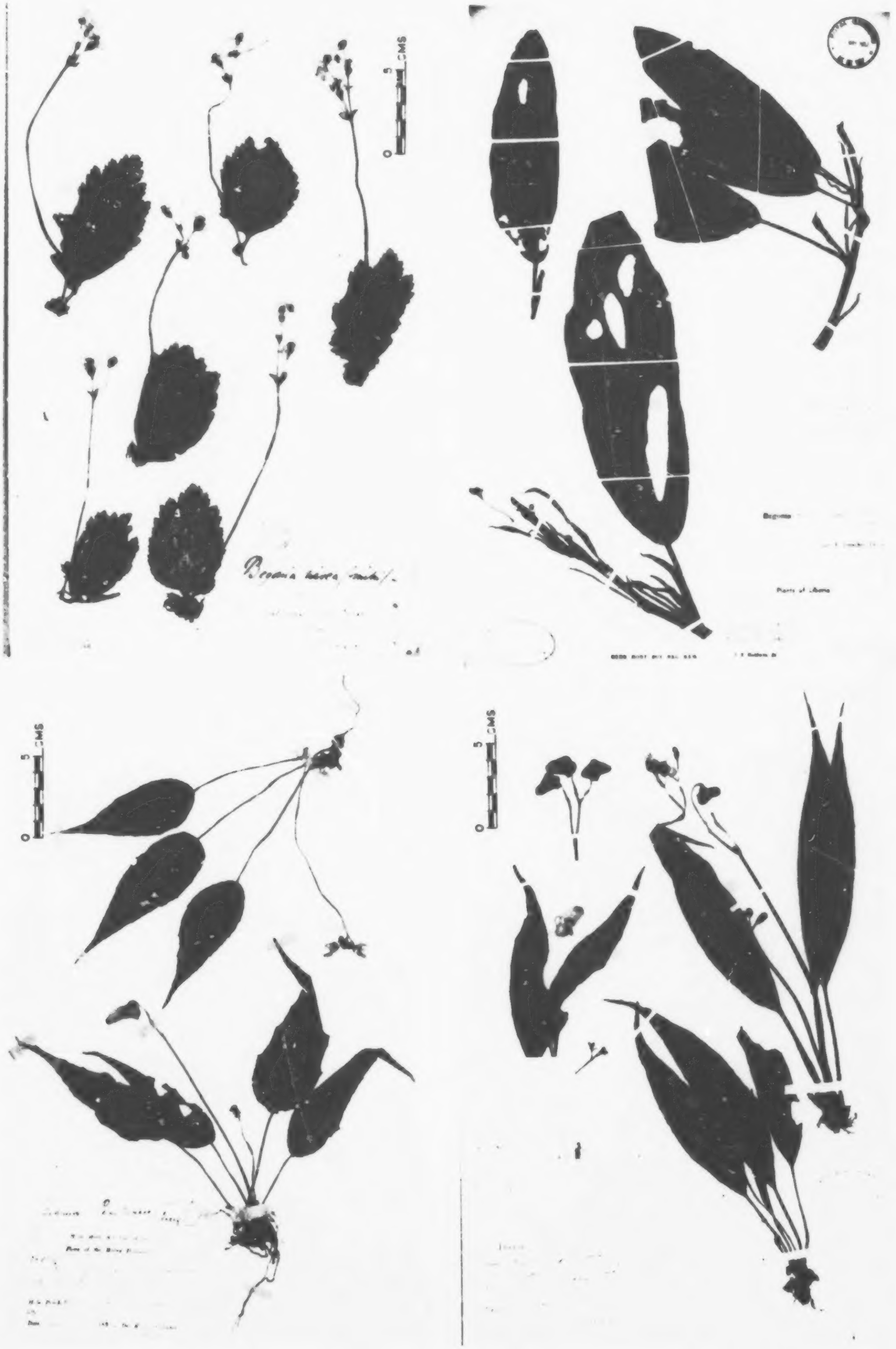
12.24, *B. carnosula;* 12.25, *B. cucullata;* 12.26, *B. integerrima;* 13.1, *B. peperomioides.*


49
BEGONIA DEPAUPERATA. Schott
CMS
5
0
H.S.
Mus bot Berol

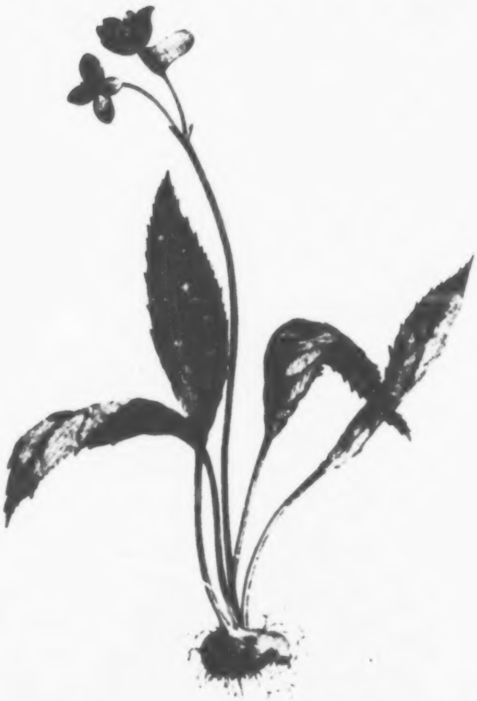
13.2, *B. plantaginea;* 13.3, *B. depauperata;* 13.4, *B. velloziana;* 13.5, *B. attenuata.*

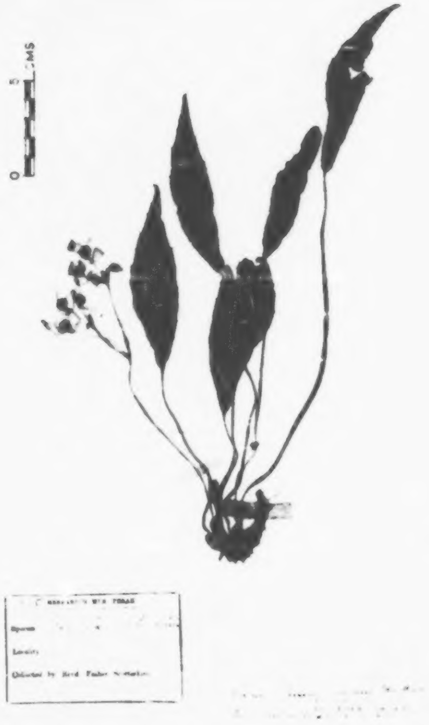

Monœ. Polyand.
BEGONIA HERBACEA
Monœ. Polyand.
BEGONIA LANCEOLATA
(Tab. 35.)
Begonia (Trachelocarpus) angraensis Brade n. sp.
1.
2.
3.
4.
5.
6.
7.
8.
9.

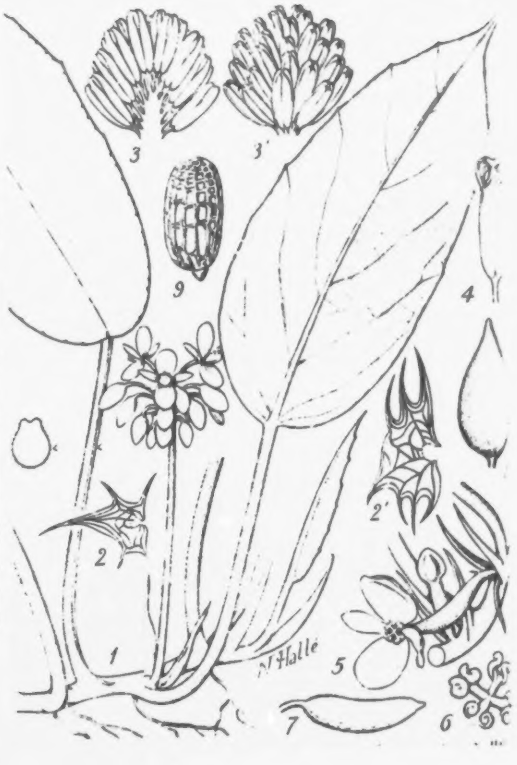
13.6, *B. herbacea;* 13.7, *B. fulvo-setulosa;* 13.8, *B. lanceolata;* 13.9, *B. angraënsis.*


0 5 CMS
0 5 CMS
0 5 CMS

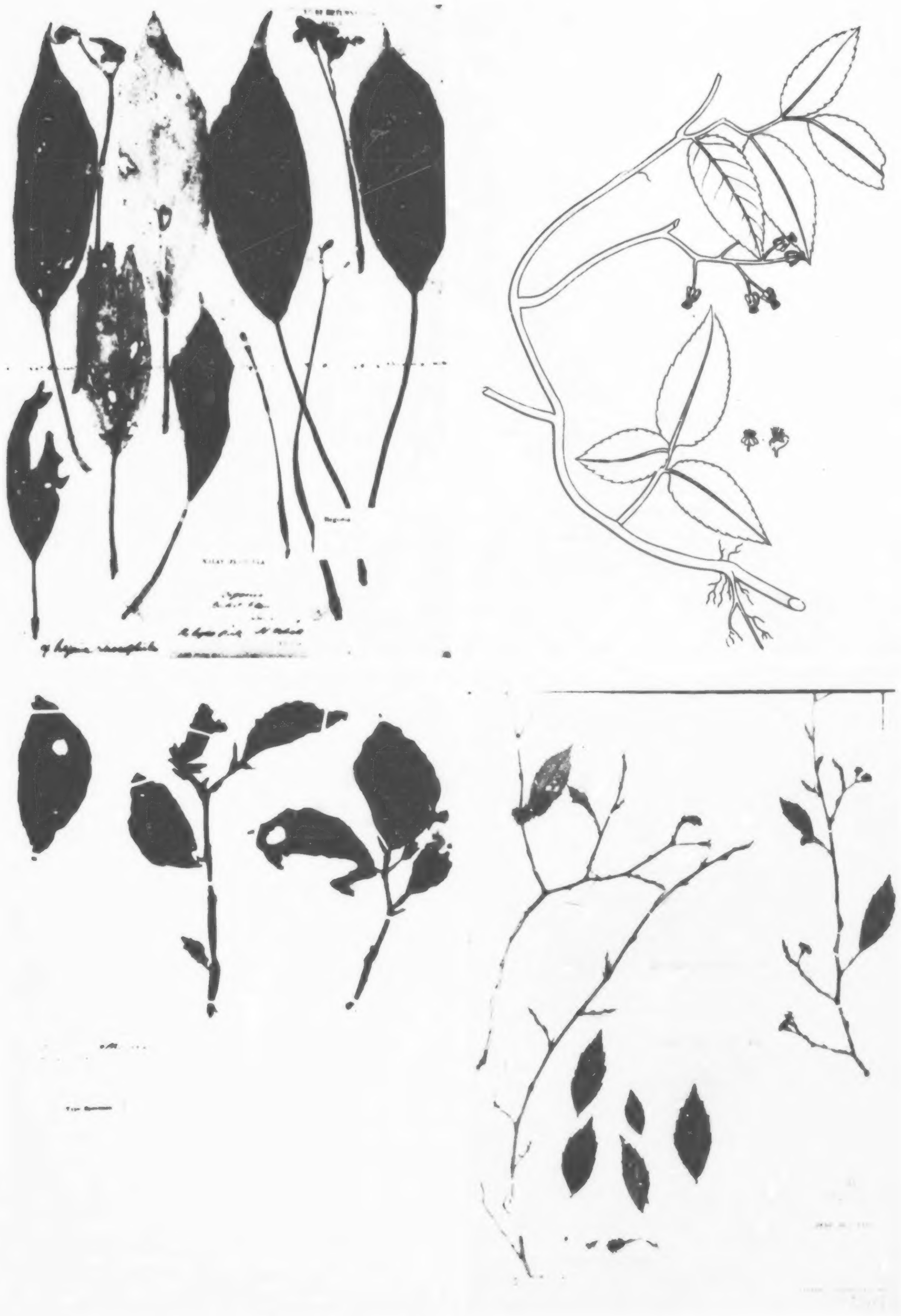
13.10, *B. nivea;* 13.11, *B. fusicarpa;* 13.12, *B. perakensis;* 13.13, *B. rhoephila.*



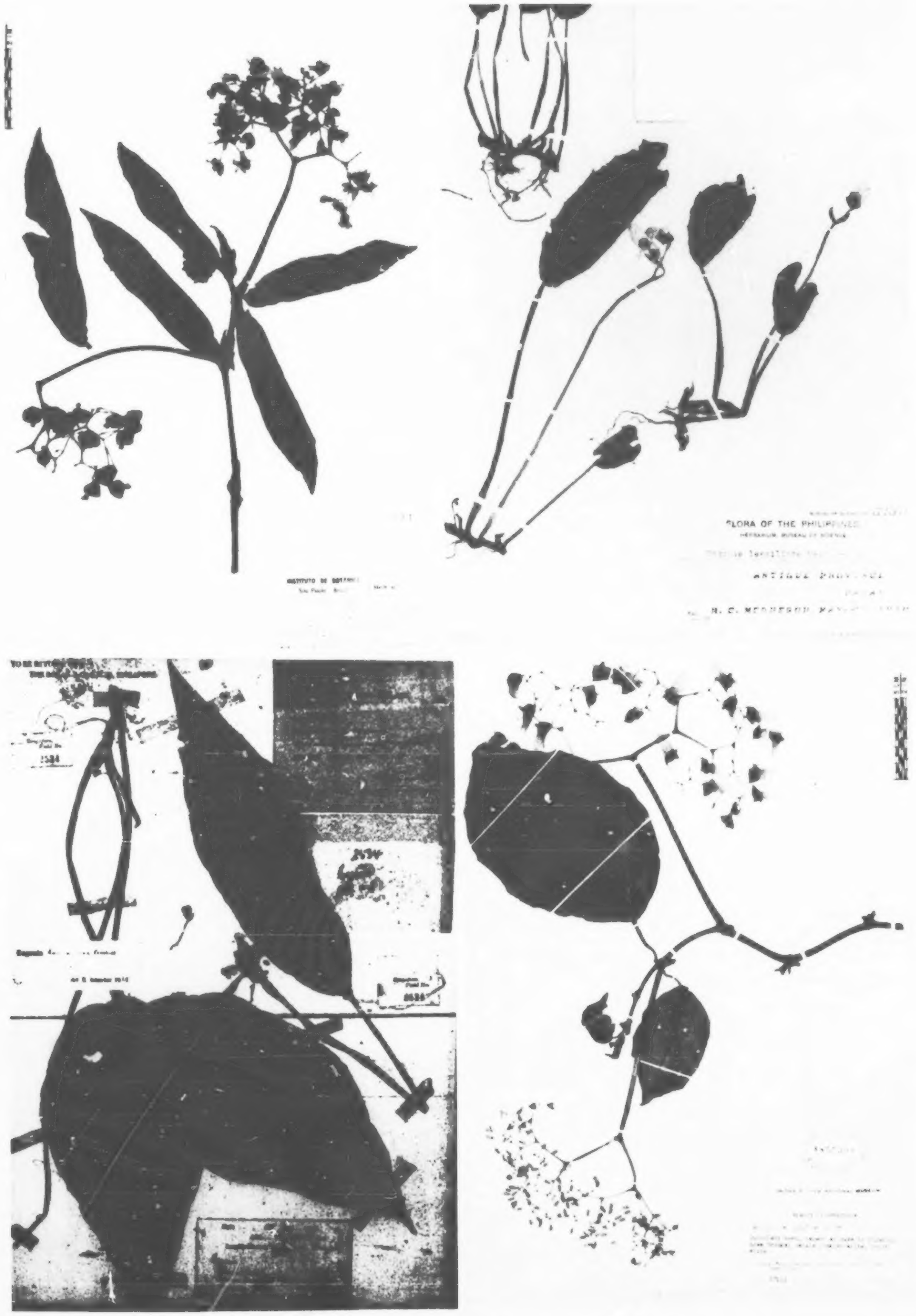



3
3'
9
4
2
2'
1
N.Hallé
5
7
6

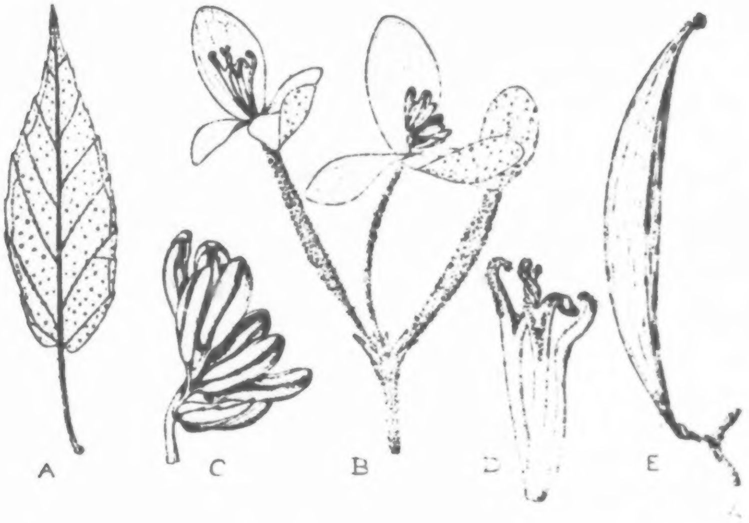
13.14, *B. nana;* 13.15, *B. scortechinii;* 13.16, *B. warpurii;* 13.17, *B. squamulosa.*

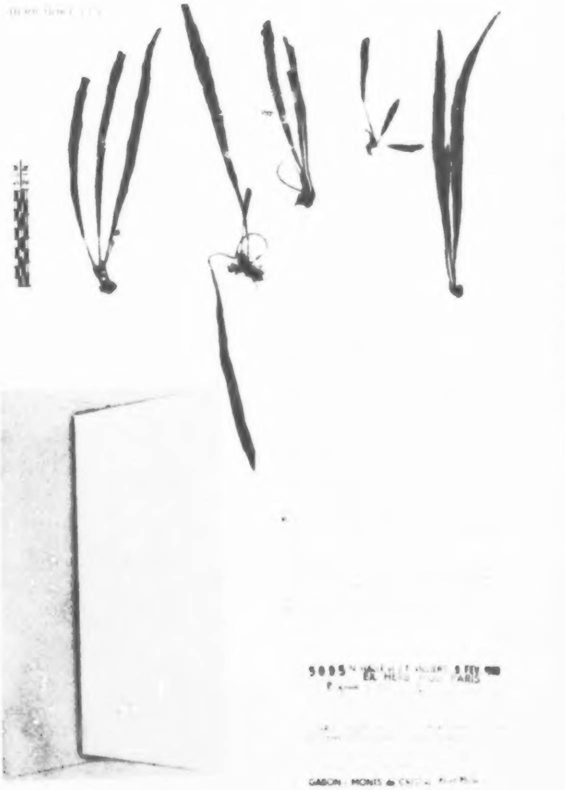


13.18, *B. collina;* 14.1, *B. cerasiphylla;* 14.2, *B. albobracteata;* 14.3, *B. fruticosa.*


INSTITUTO DE BOTANICA
FLORA OF THE PHILIPPINES
HERBARIUM, BUREAU OF SCIENCE
2584

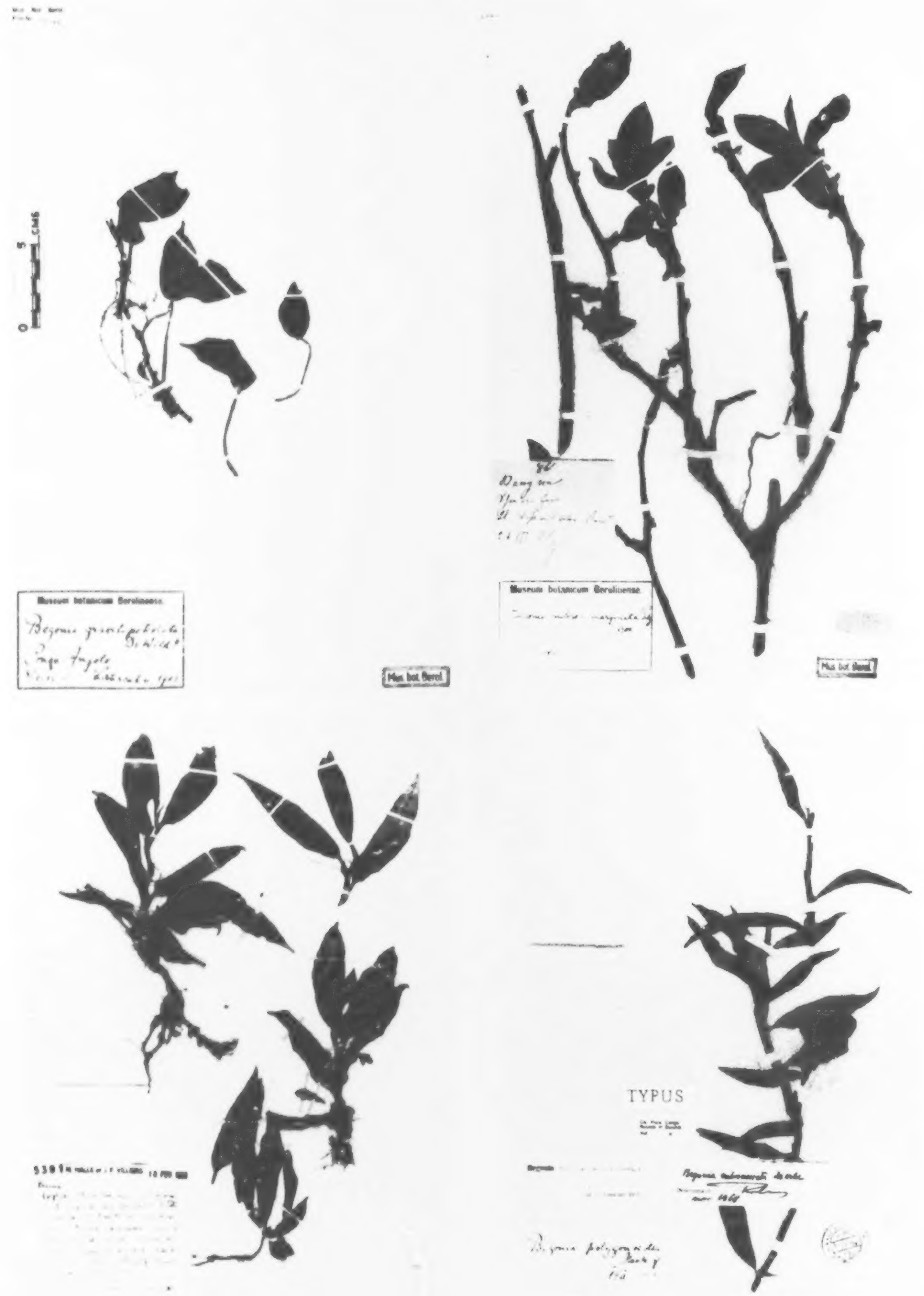
14.4, *B. parilis;* 14.5, *B. lancilimba;* 14.6, *B. tampinica;* 14.7, *B. glabra.*



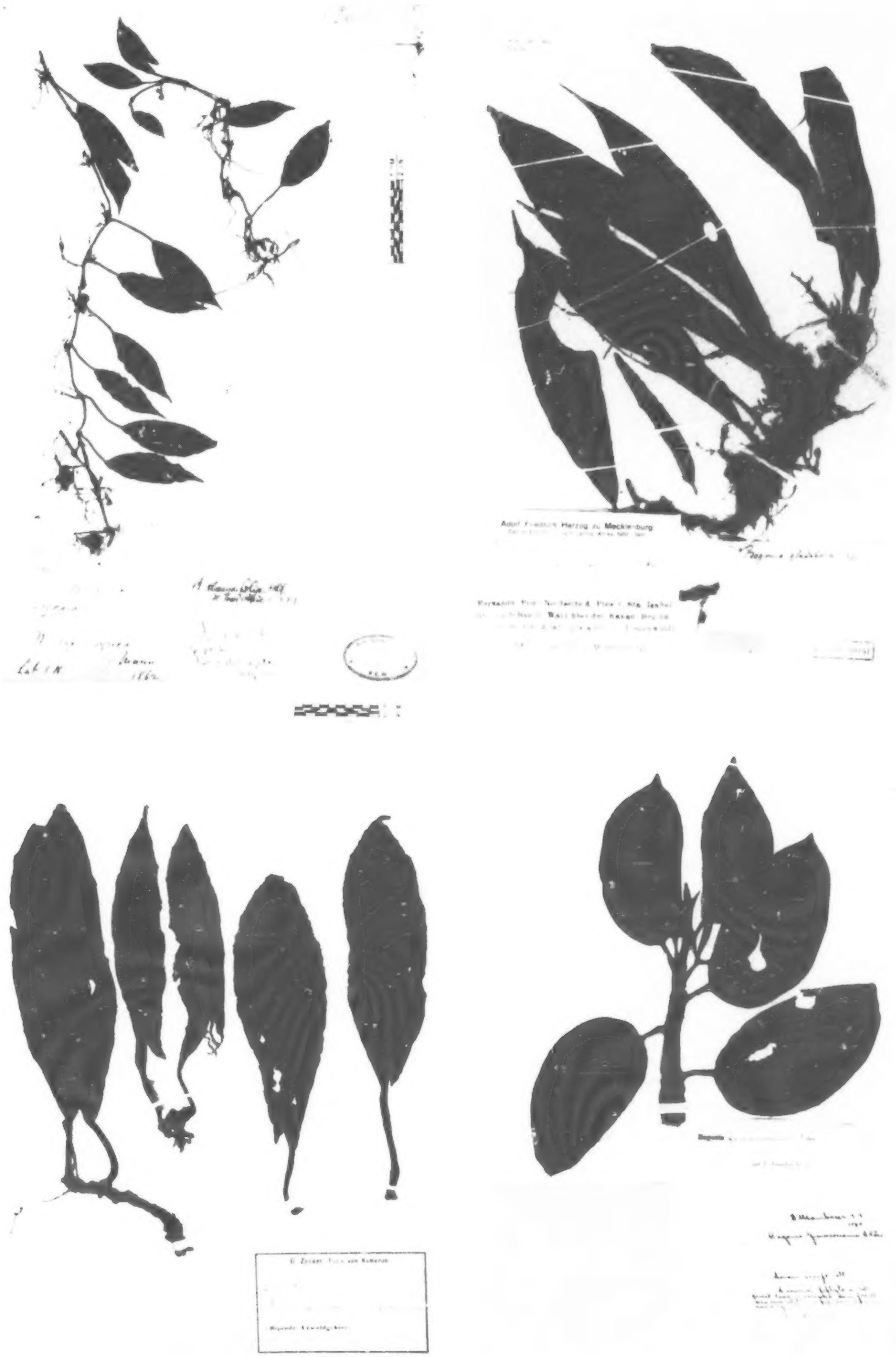

5005
EX HERB.
PARIS
GABON

14.9 (top), *B. tatoniana;* 14.8, *B. vittariifolia;* 14.10, *B. lethomasiae.*

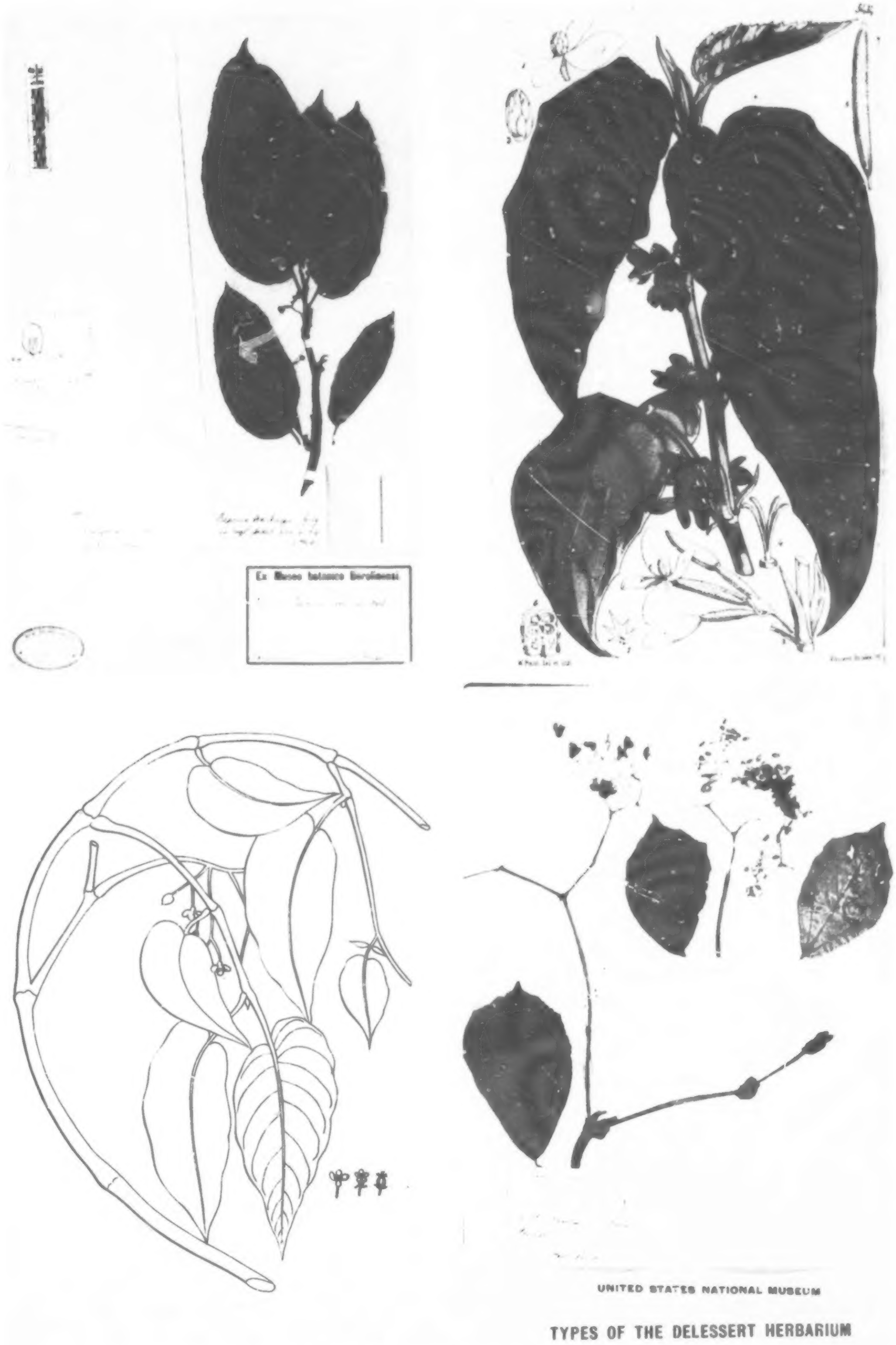
BEST COPY AVAILABLE


Museum botanicum Berolinense
Mus. bot. Berol.
Museum botanicum Berolinense
Mus. bot. Berol.
TYPUS

14.11, *B. gracilipetiolata*; 14.12, *B. rubro-marginata*; 14.13, *B. nicolai-hallei*; 14.14, *B. rubronervata*.


Adolf Friedrich Herzog zu Mecklenburg
G. Zenker. Flora von Kamerun
Bipindi. Urwaldgebiet.

14.15, *B. elaeagnifolia;* 14.16, *B. gladiifolia;* 14.17, *B. crassipes;* 14.18, *B. zimmermannii.*


Ex Museo botanico Berolinensi
UNITED STATES NATIONAL MUSEUM
TYPES OF THE DELESSERT HERBARIUM

14.19, *B. eminii;* 14.20, *B. mannii;* 14.21, *B. declinata;* 14.22, *B. smilacina.*

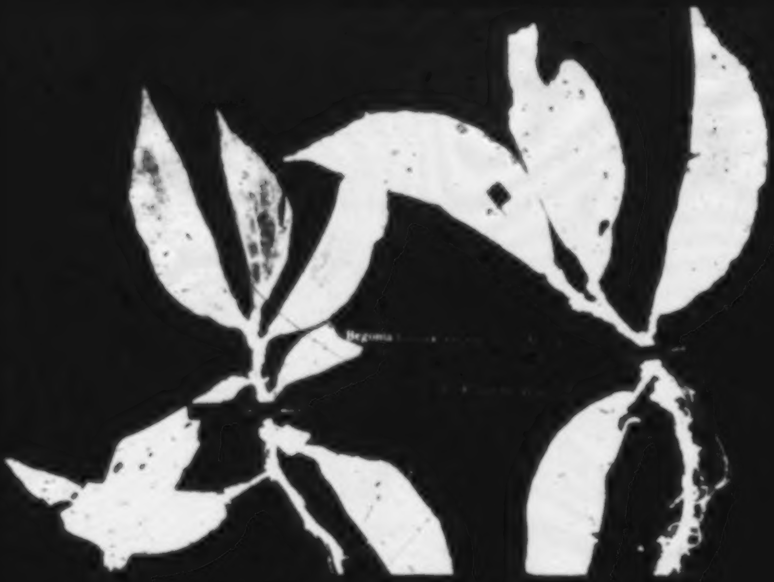
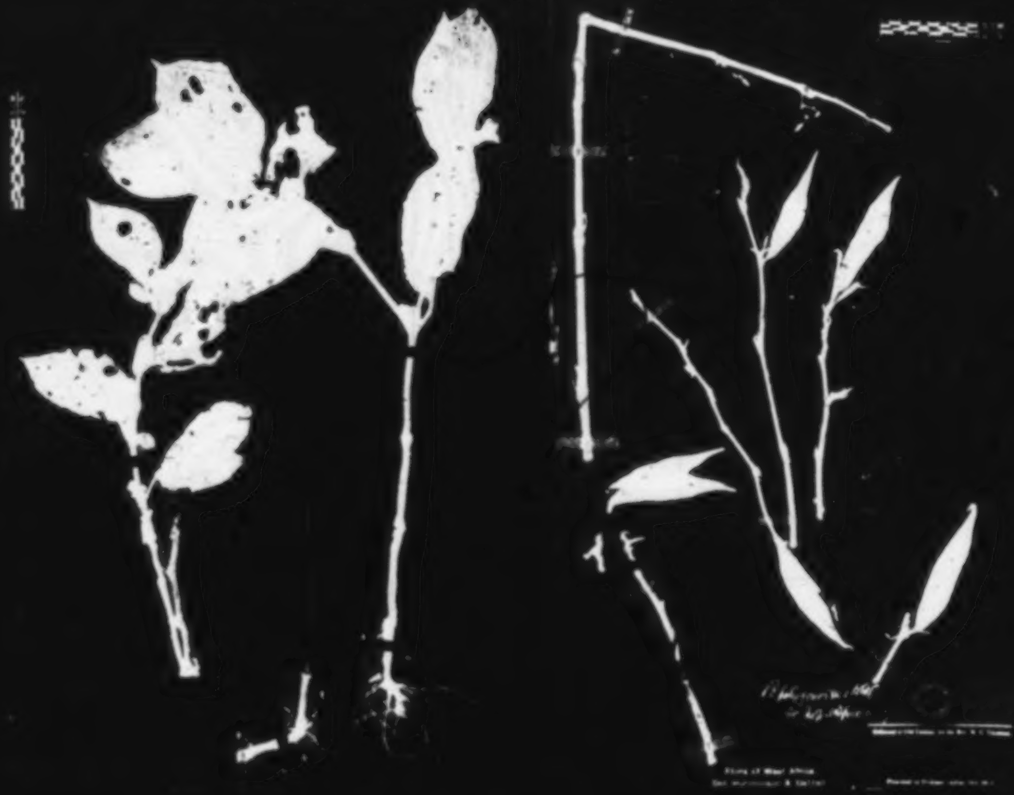
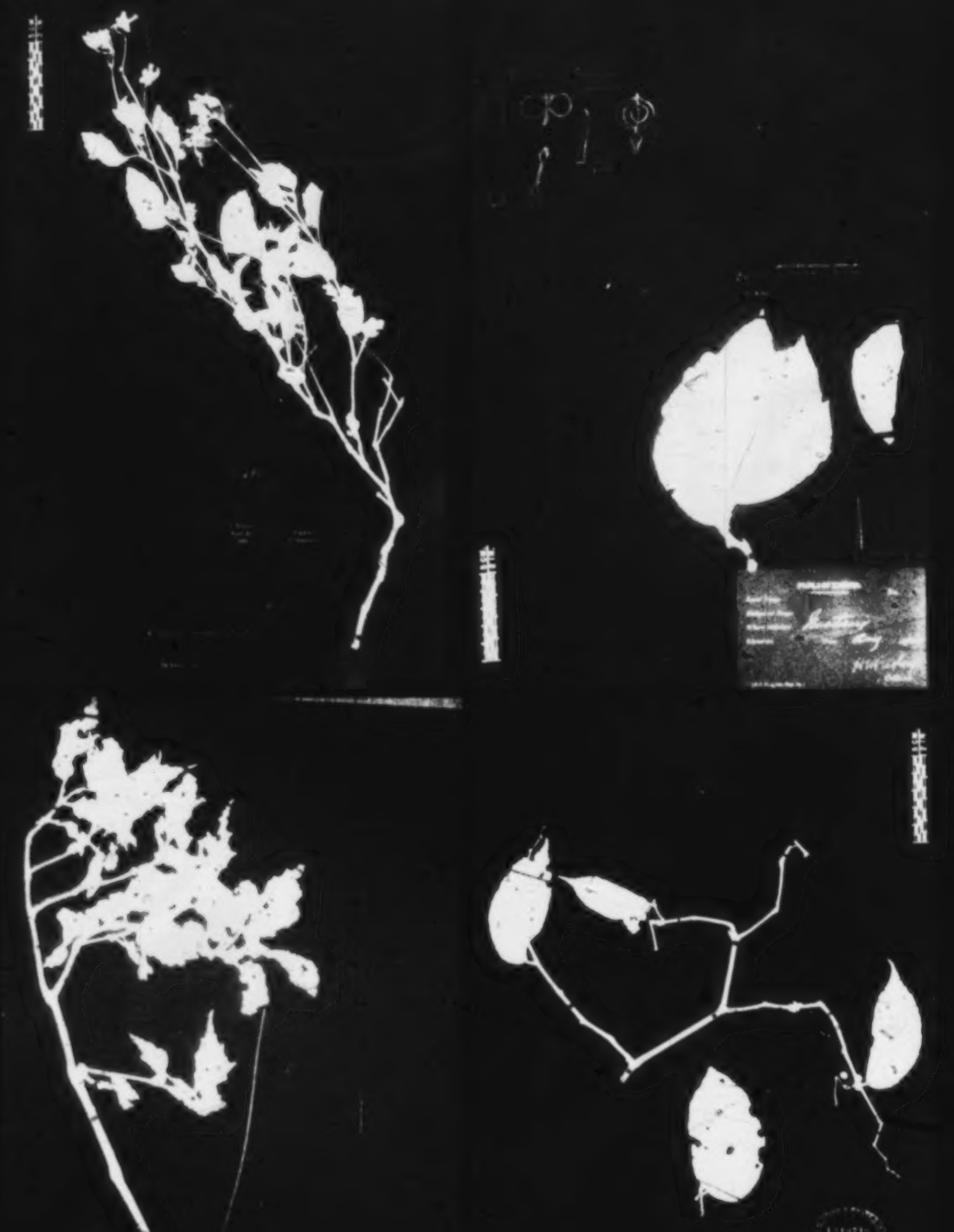


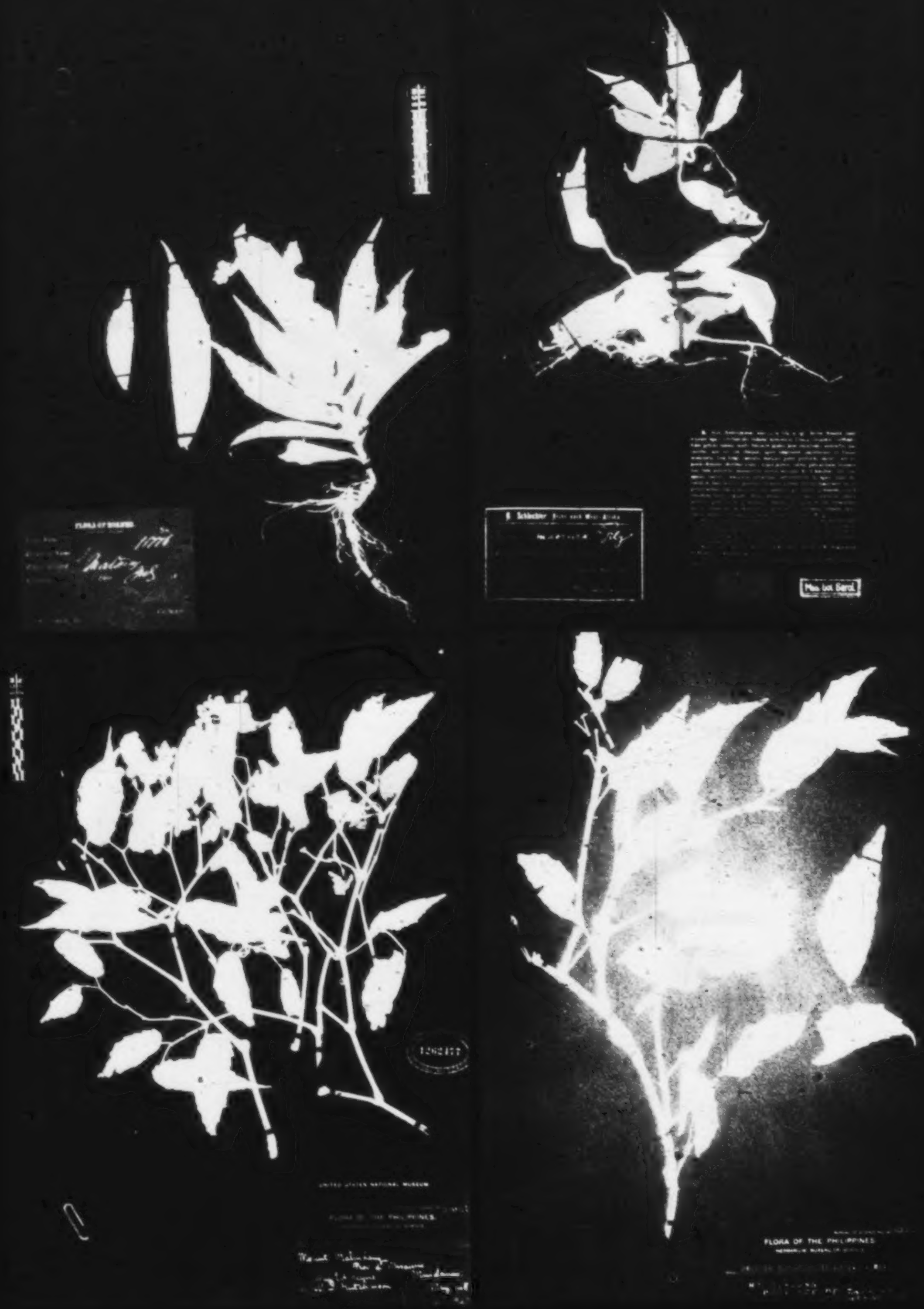
Fig. 8 - *Begonia lunatistyla* Irmsch. (*Beccari P. B. n. 3784* - Herb. Beccari n. 4475)



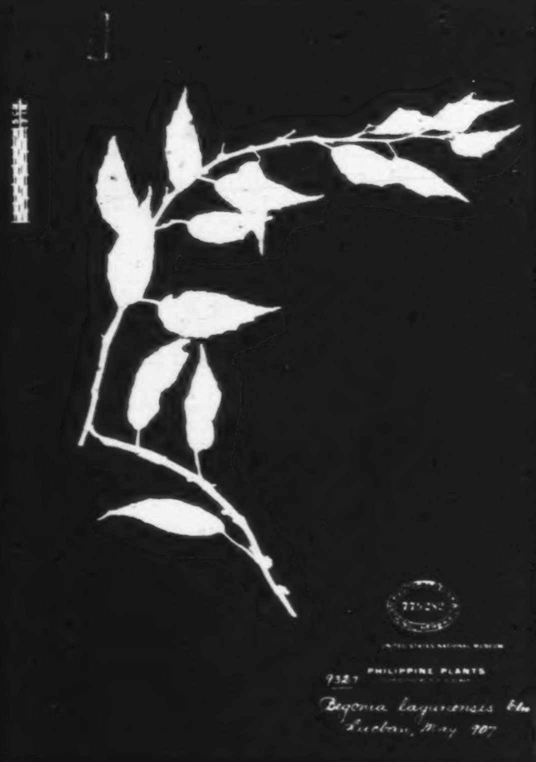
14.24 (top), *B. lunatistyla;* 14.23, *B. aberrans;* 14.25, *B. polygonoides.*

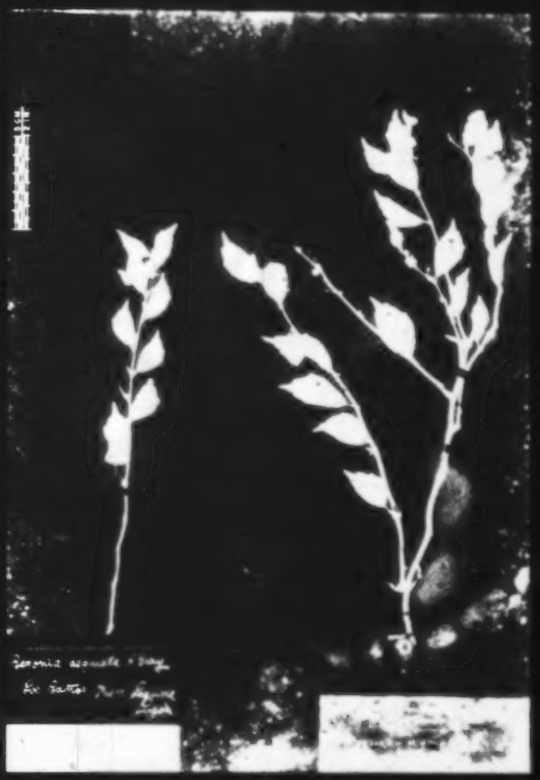


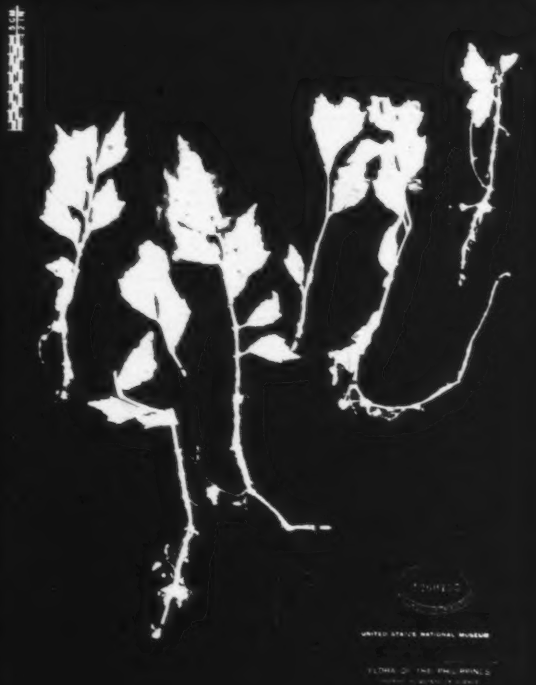
14.26, *B. montana;* 14.27, *B. pubescens;* 14.28, *B. urdanetensis;* 14.29, *B. pilosella.*

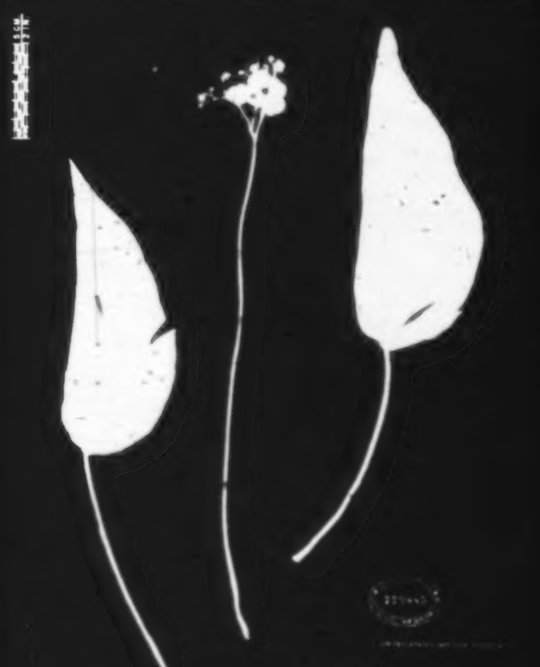


14.30, *B. hullettii;* 14.31, *B. squamulosa;* 14.32, *B. malindangensis;* 14.33, *B. binuangensis.*

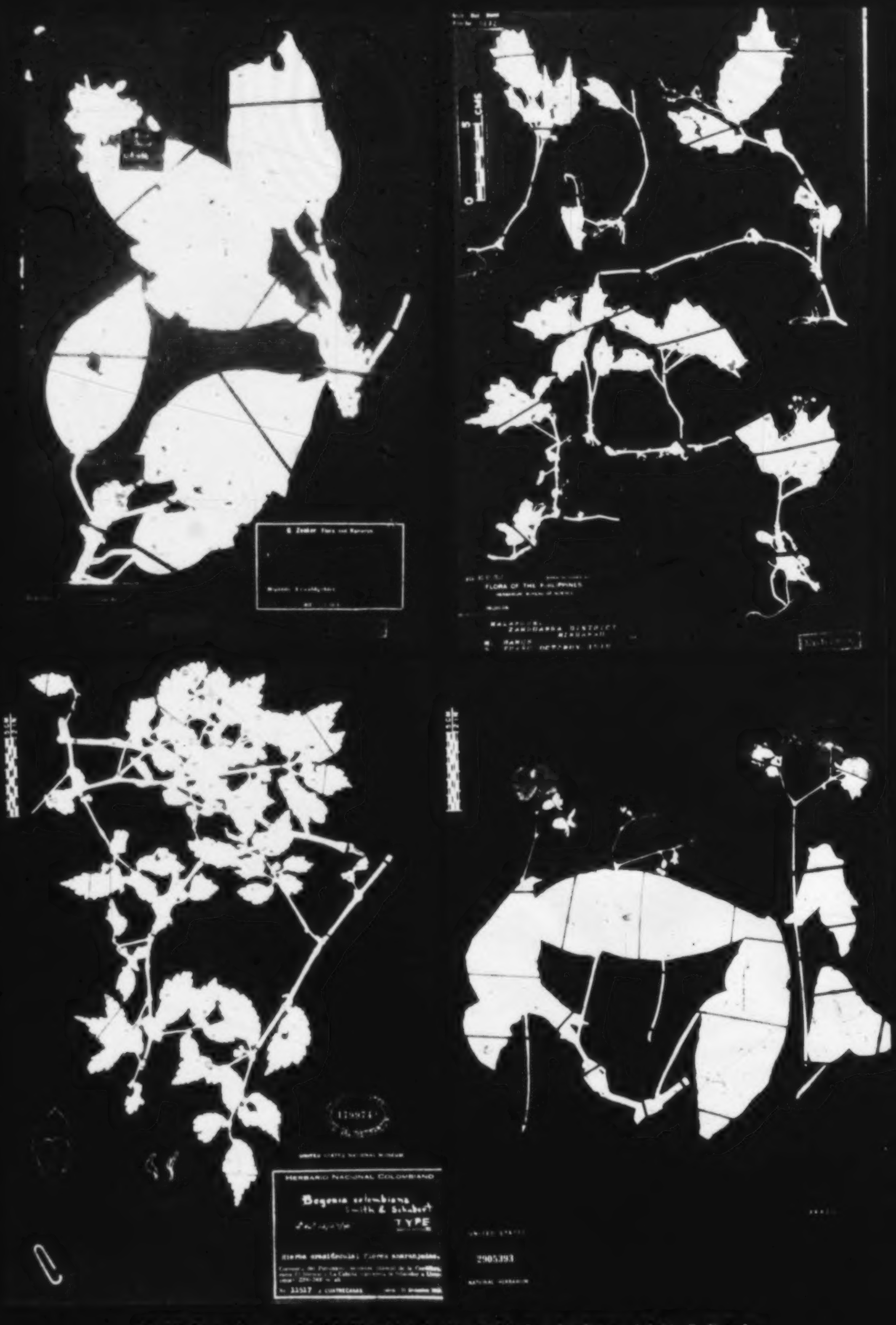

9327
PHILIPPINE PLANTS
Begonia lagunensis Elm.
Lucban, May 907


Begonia aequata A. Gray

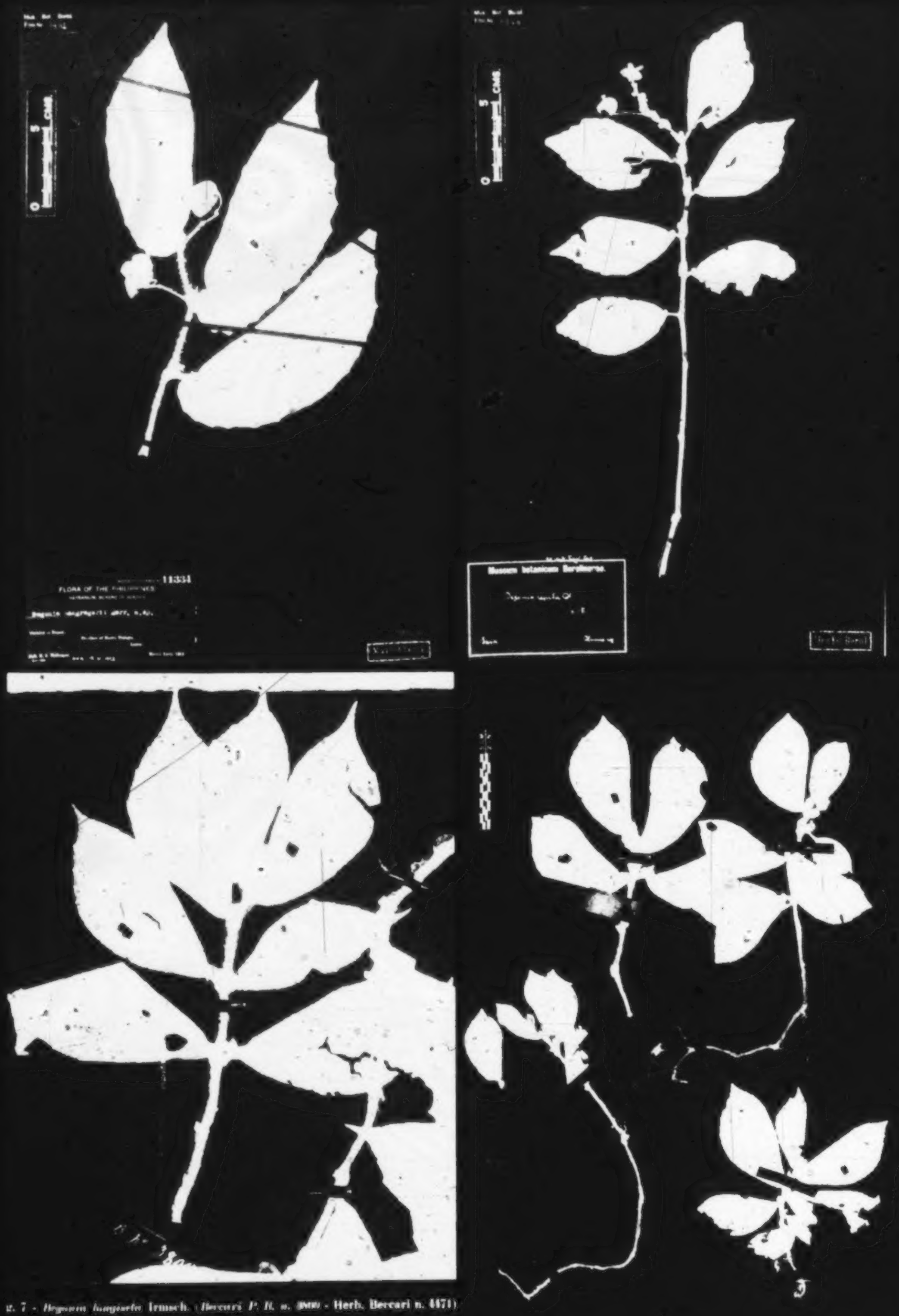

UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES


Begonia gitingensis

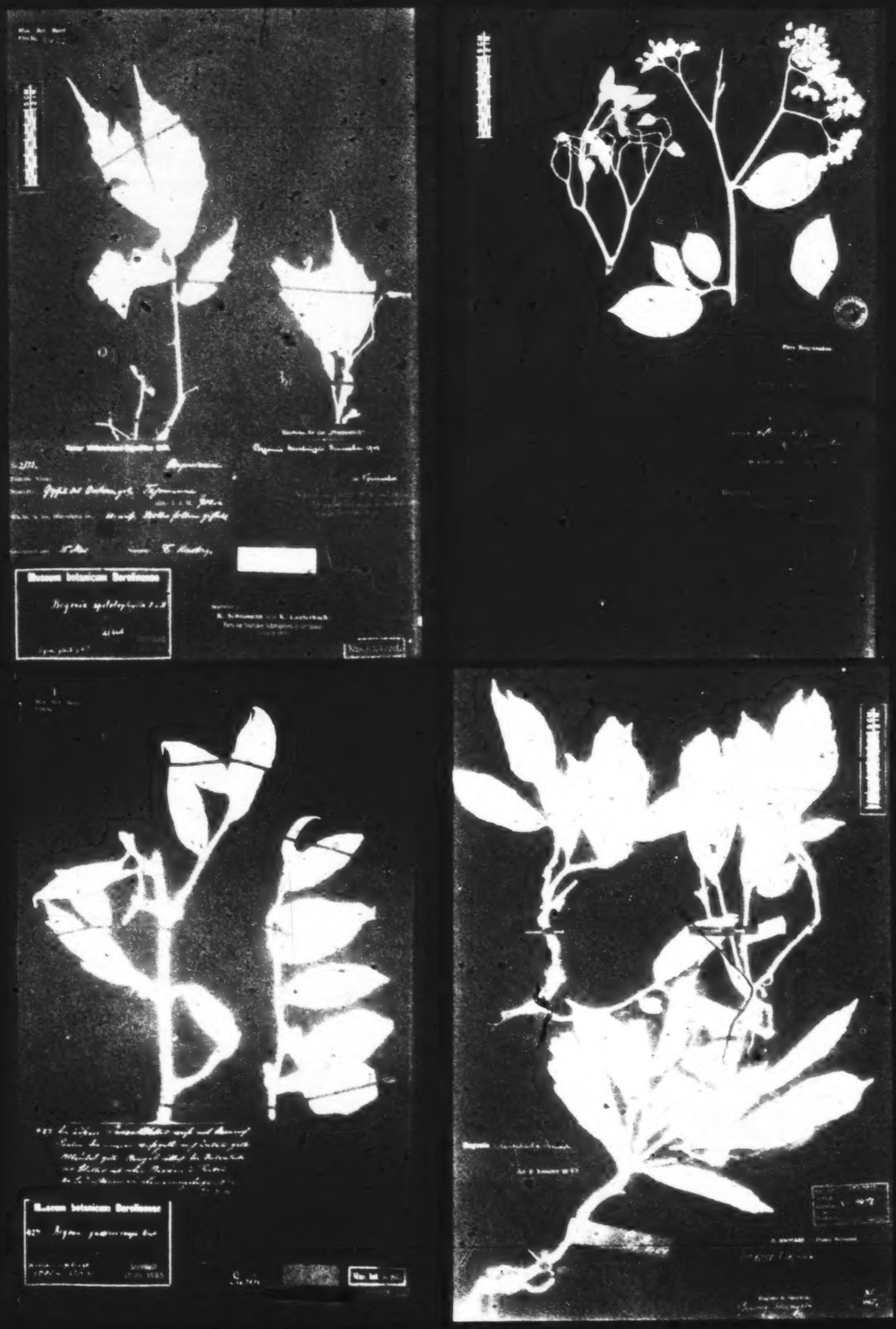
14.34, *B. lagunensis*; 14.35, *B. aequata*; 14.36, *B. parvilimba*; 14.37, *B. gitingensis*.


FLORA OF THE PHILIPPINES
ZAMBOANGA DISTRICT
MINDANAO
UNITED STATES NATIONAL MUSEUM
HERBARIO NACIONAL COLOMBIANO
Begonia colombiana
Smith & Schubert
TYPE
2905393
NATIONAL HERBARIUM

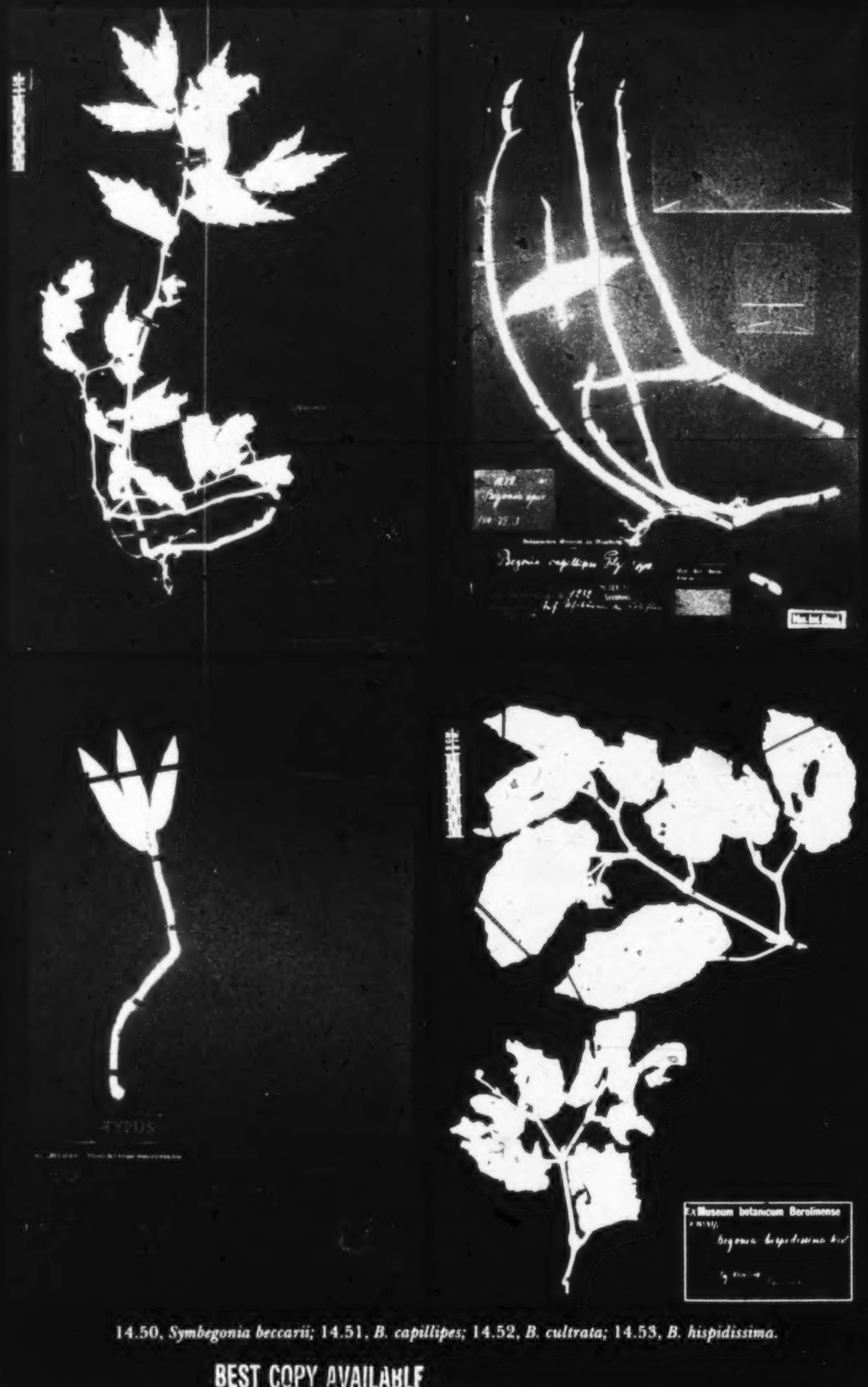
14.38, *B. zenkerana;* 14.39, *B. subprostrata;* 14.40, *B. colombiana;* 14.41, *B. listada.*


11334
FLORA OF THE PHILIPPINES
Museum botanicum Berolinense
7 - Begonia longiseta Irmsch. (Beccari P. B. n. [illegible] - Herb. Beccari n. 4471)

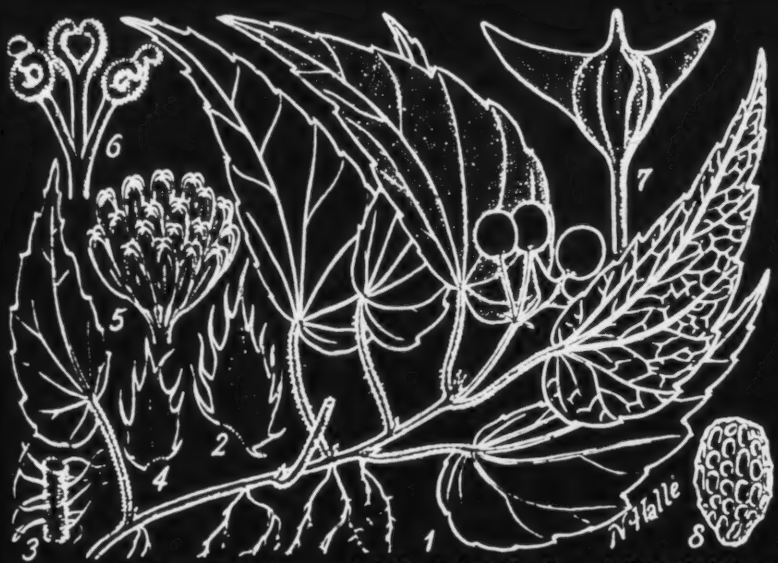
14.42, *B. macgregorii;* 14.43, *B. lepida;* 14.44, *B. longiseta;* 14.45, *B. articulata.*


Museum botanicum Berolinense
K. Schumann und K. Lauterbach
Museum botanicum Berolinense

14.46, *B. kerstingii;* 14.47, *B. holtonis;* 14.48, *B. jussiaeicarpa;* 14.49, *B. pleioclada.*

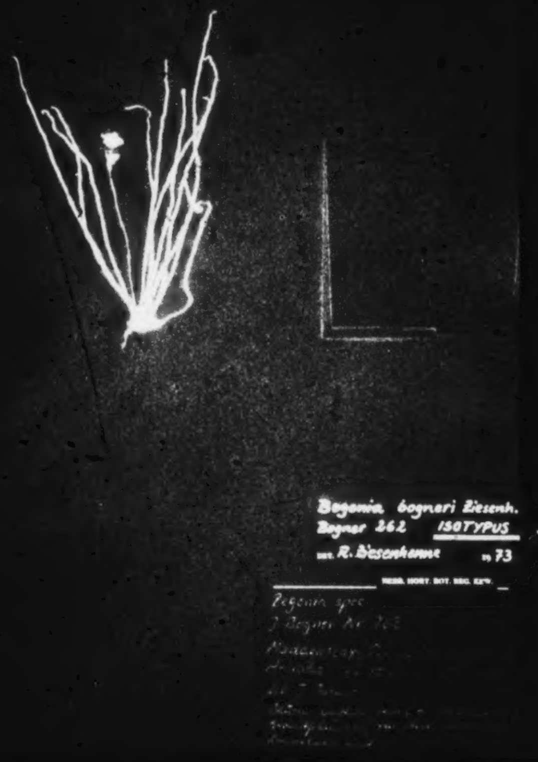

Begonia capillipes Irmsch.
TYPUS
Ex Museum botanicum Berolinense
Begonia hispidissima

14.50, *Symbegonia beccarii;* 14.51, *B. capillipes;* 14.52, *B. cultrata;* 14.53, *B. hispidissima.*



1. 8. — **Begonia aggeloptera N. Hallé** (*N. H. 4817*) : 1, plante florifère × 1 ; 2, stipule de 5 mm ;

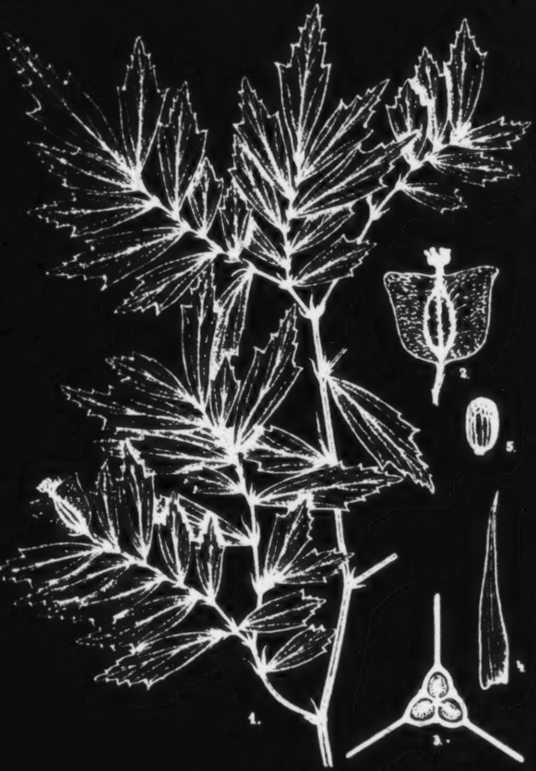
3, détail du pétiole ; 4, bractée longue de 3 mm ; 5, androcée haut de 3 mm ; 6, style 4 mm



Begonia bogneri Ziesenh.
Bogner 262 ISOTYPUS
det. R. Ziesenhenne 19 73

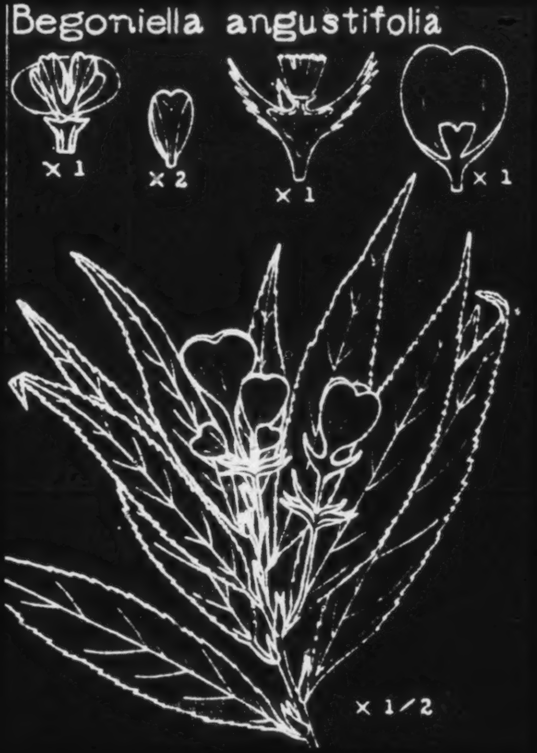
HERB. HORT. BOT. REG. KEW.

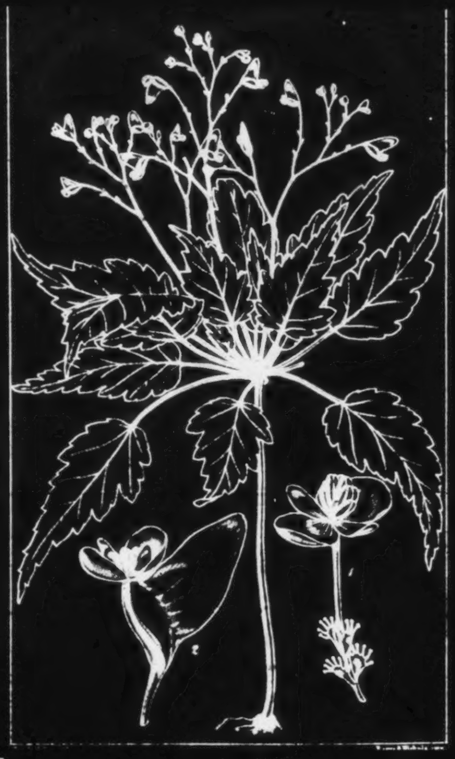
Begonia spec.
J. Bogner Nr. 262



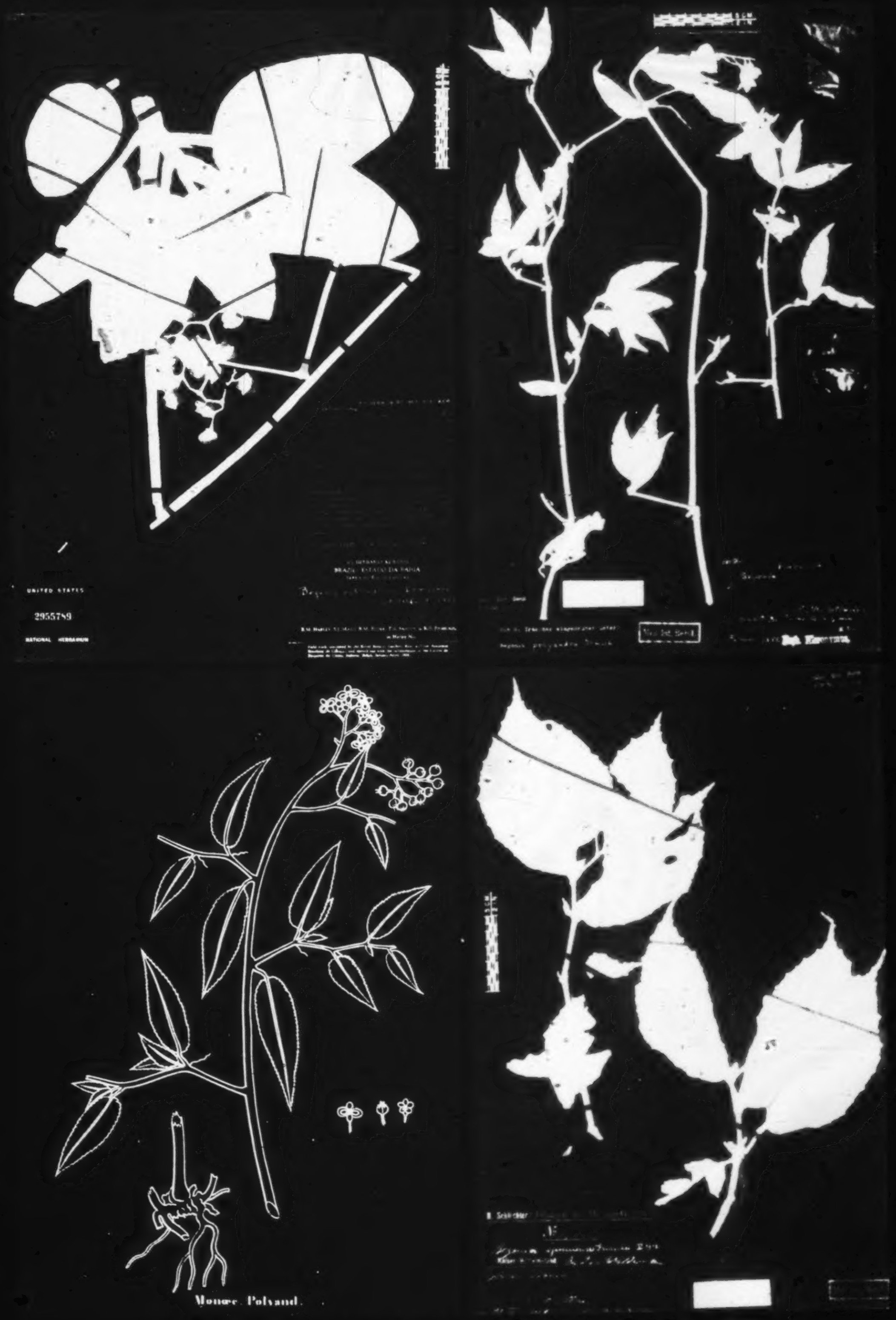
14.54, *B. aggeloptera*; 15.1, *B. bogneri*; 15.2, *B. itatinensis*.

BEST COPY AVAILABLE

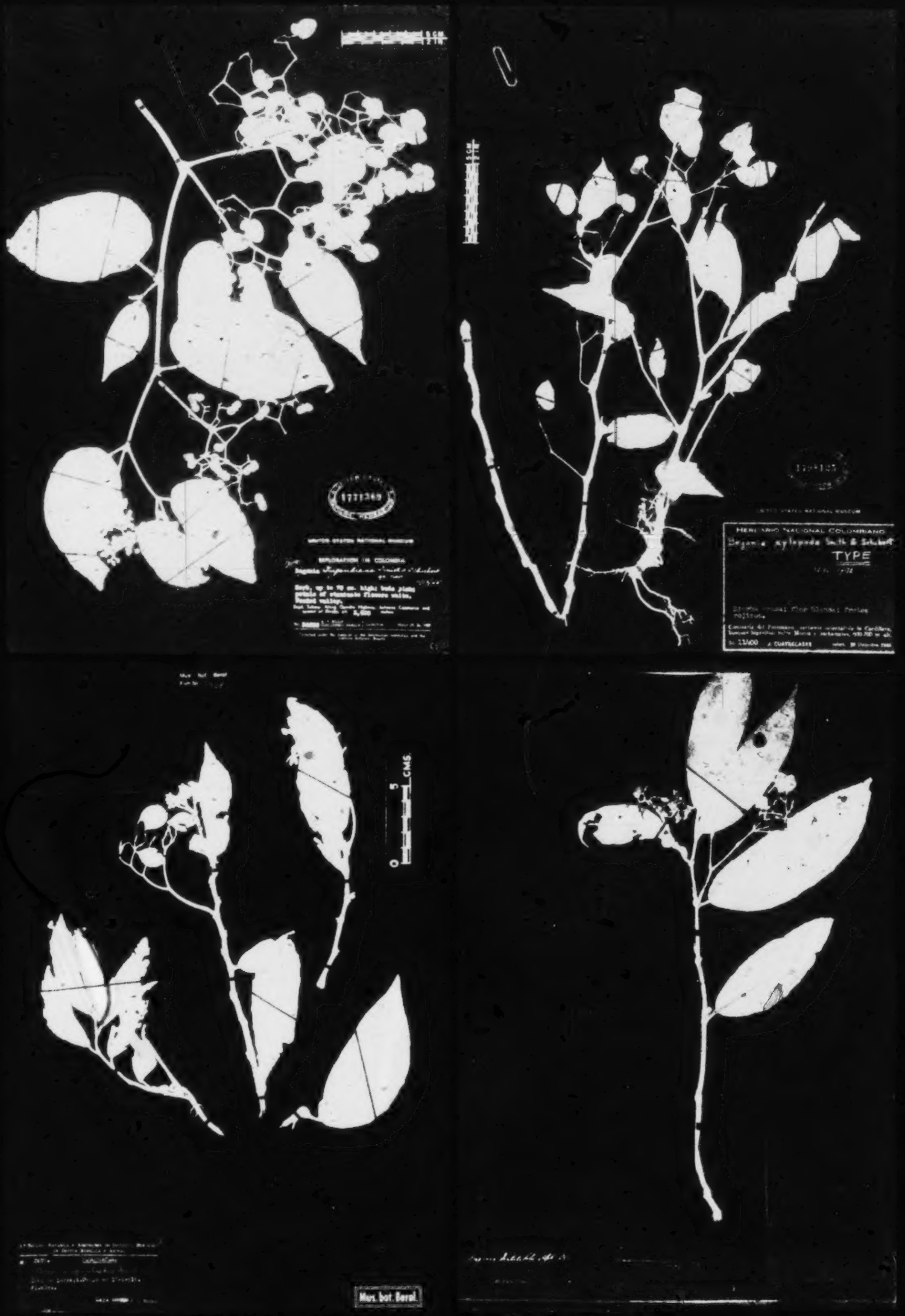

Begoniella angustifolia
× 1
× 2
× 1
× 1
× 1/2



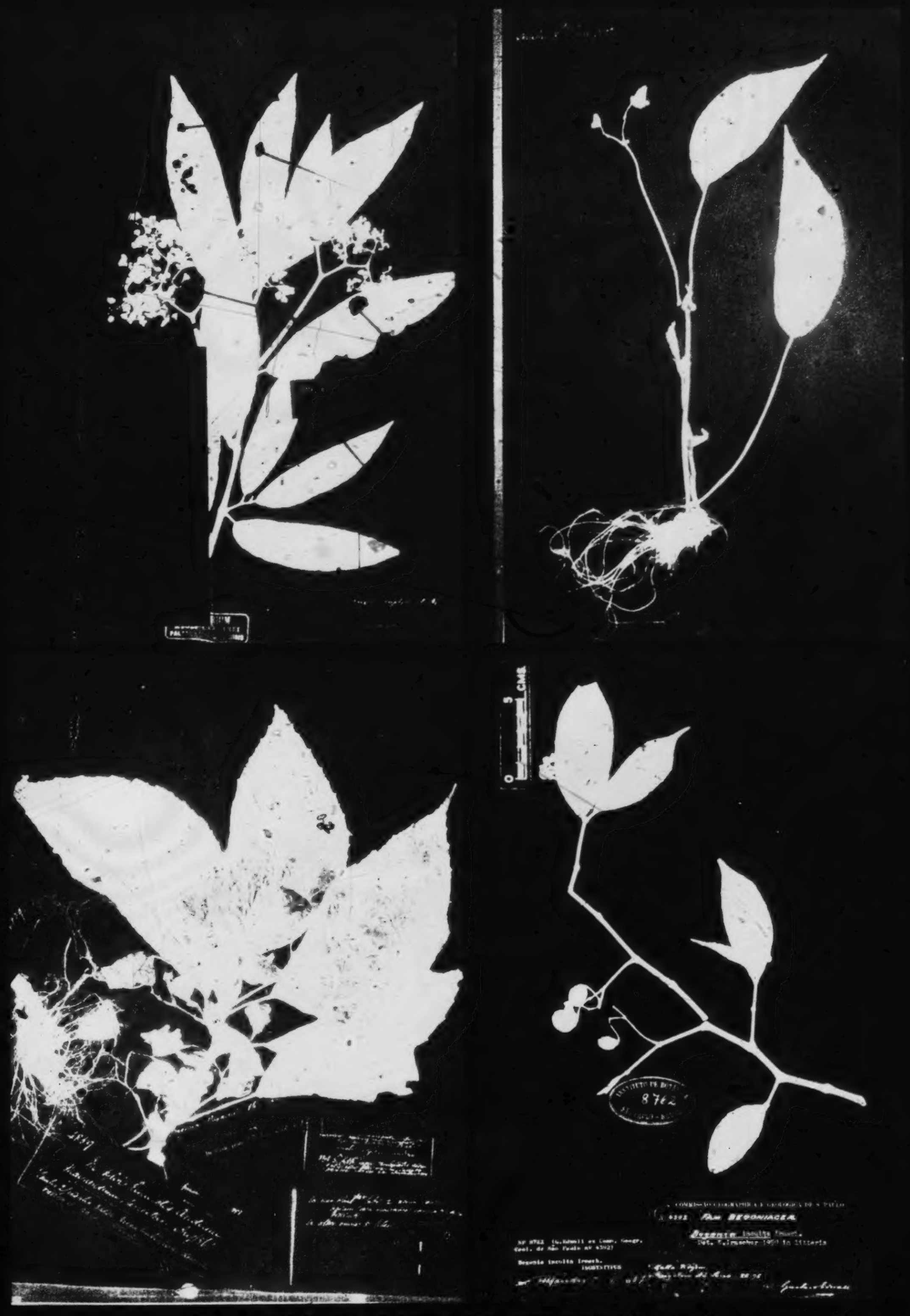
15.3, *B. irmscheri;* 15.4, *B. adenopoda;* 15.5, *B. stenophylla;* 15.6, *B. salicifolia.*


UNITED STATES
2955789
NATIONAL HERBARIUM
BRAZIL: ESTADO DA BAHIA
Monœc. Polyand.

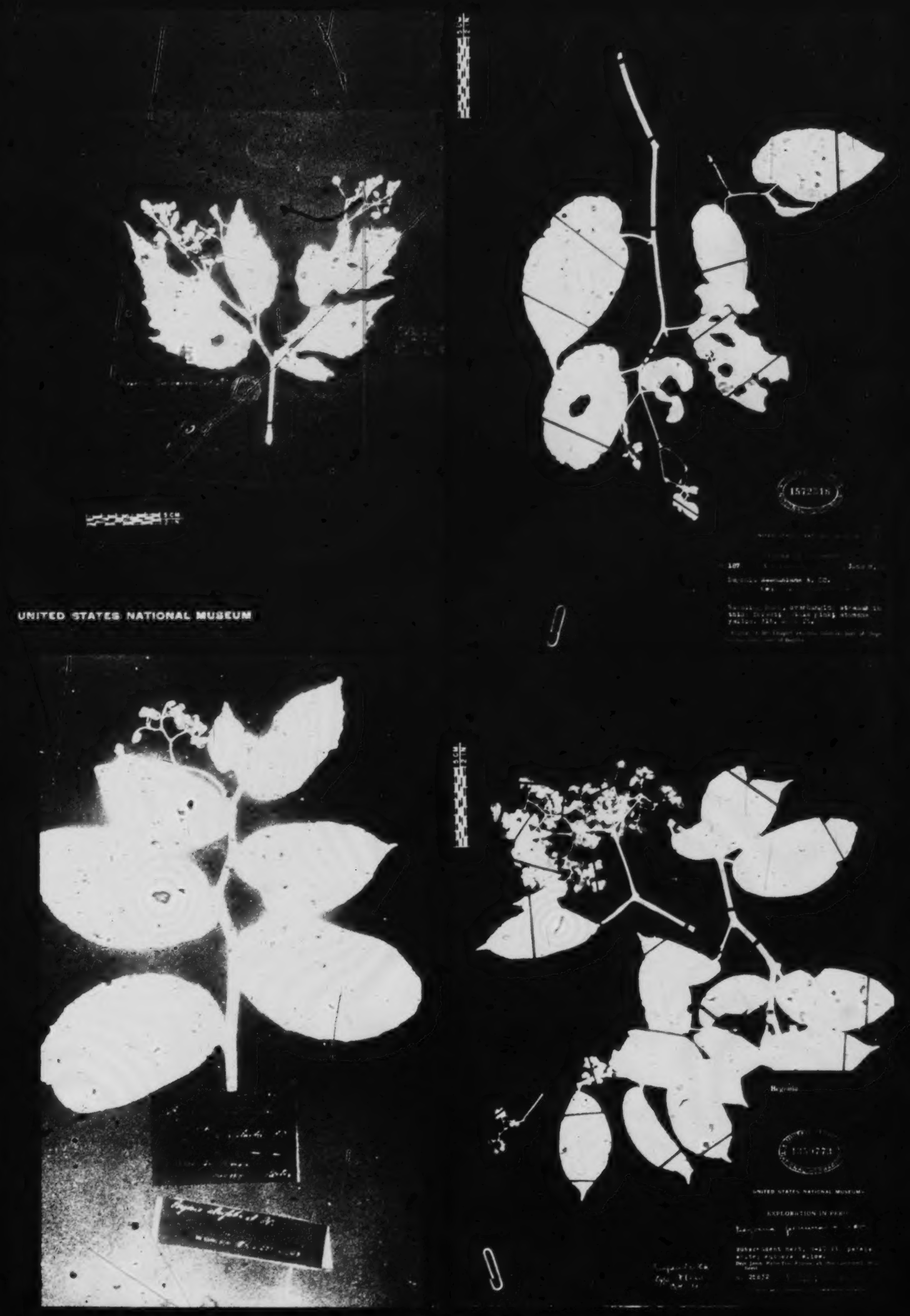
15.7, *B. ruhlandiana;* 15.8, *B. polyandra;* 15.9, *B. erecta;* 16.1, *B. djamuensis.*


UNITED STATES NATIONAL MUSEUM
EXPLORATION IN COLOMBIA
HERBARIO NACIONAL COLOMBIANO
Begonia xylopoda Smith & Schubert
TYPE
0
5
CMS
Mus. bot. Berol.

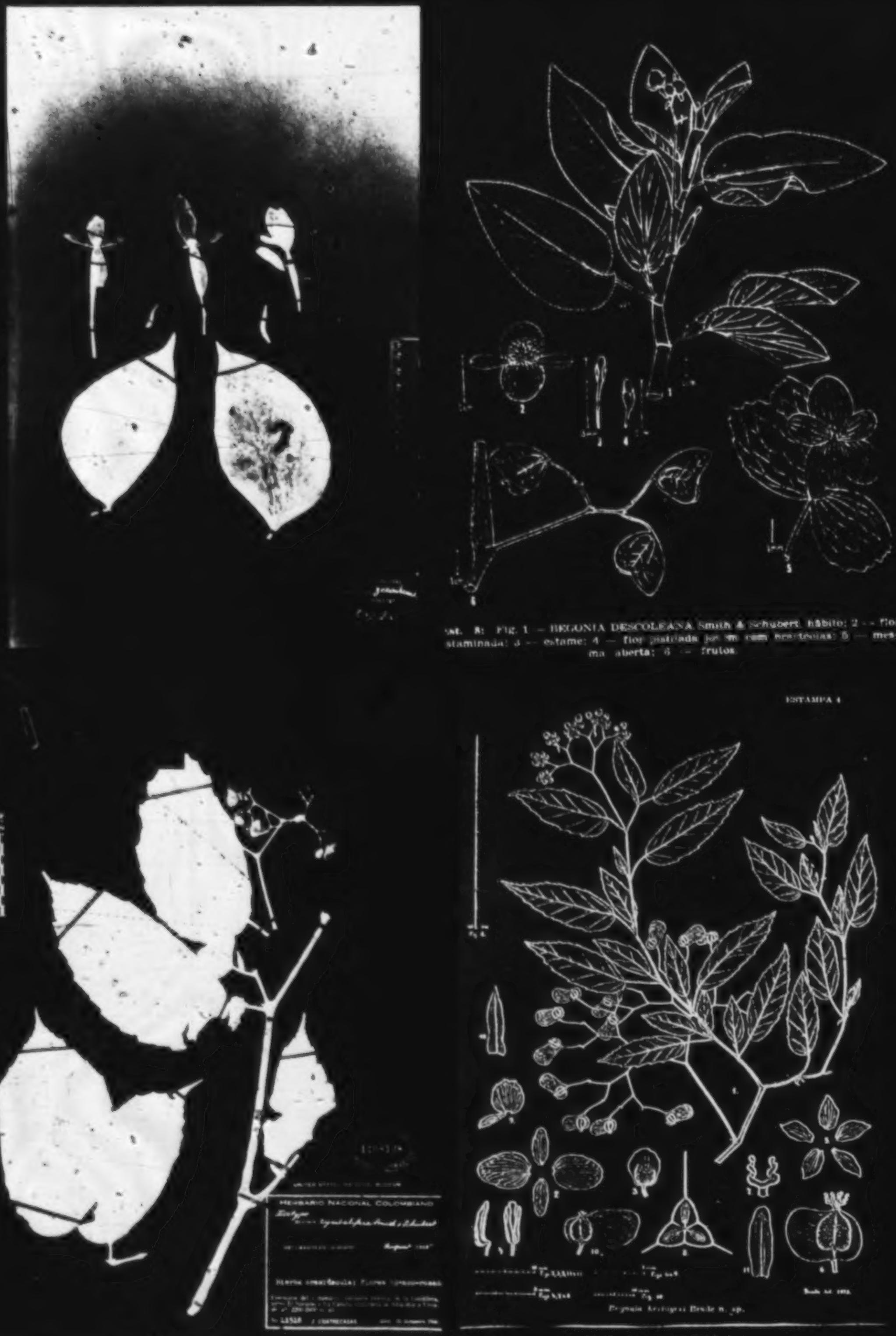
16.2, *B. dugandiana;* 16.3, *B. xylopoda;* 16.4, *B. spinibarbis;* 16.5, *B. dentatiloba.*



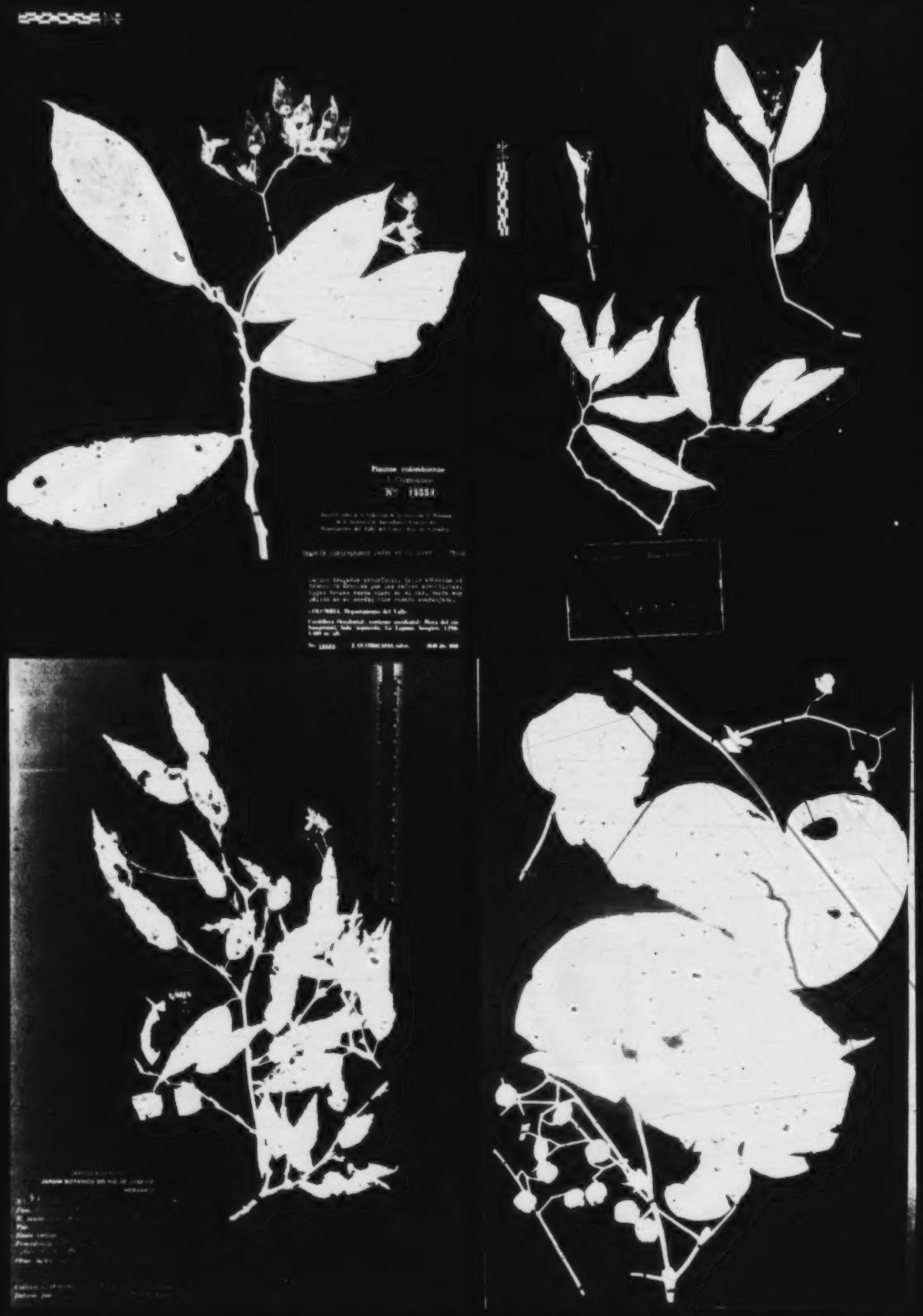
16.6, *B. oxyphylla;* 16.7, *B. hatacoa;* 16.8, *B. maynensis;* 16.9, *B. inculta.*


UNITED STATES NATIONAL MUSEUM
Begonia
UNITED STATES NATIONAL MUSEUM
EXPLORATION IN PERU

16.10, *B. cumingiana;* 16.11, *B. extensa;* 16.12, *B. alnifolia;* 16.13, *B. rubiginosipes.*

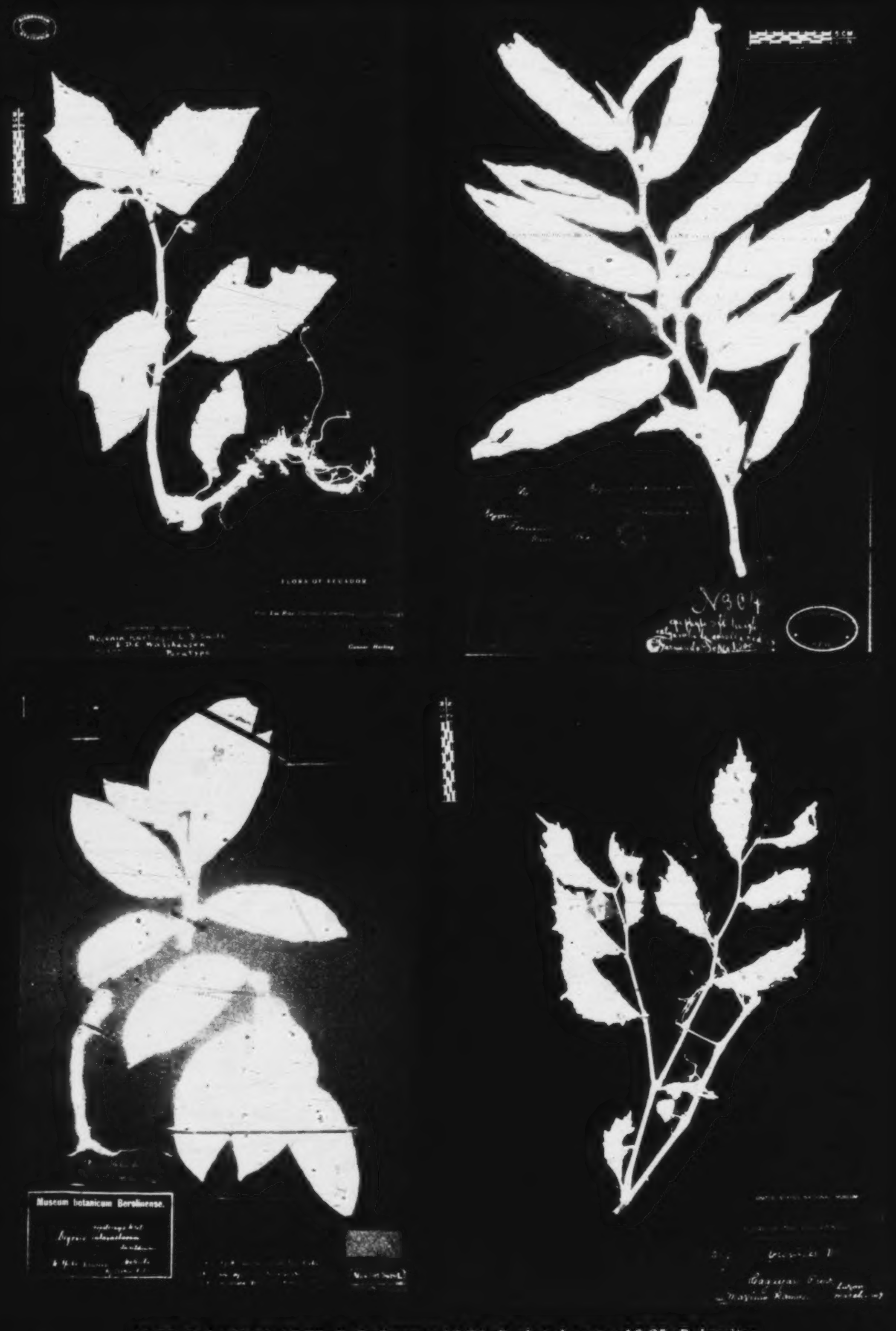

Est. 8: Fig. 1 — BEGONIA DESCOLEANA Smith & Schubert, hábito; 2 — flor staminada; 3 — estame; 4 — flor pistilada [illegible] com bracteolas; 5 — mesma aberta; 6 — frutos.
ESTAMPA 4
HERBARIO NACIONAL COLOMBIANO
Begonia heringeri Brade n. sp.

16.14, *B. loranthoides;* 16.15, *B. descoleana;* 16.16, *B. cymbalifera;* 16.17, *B. heringeri.*

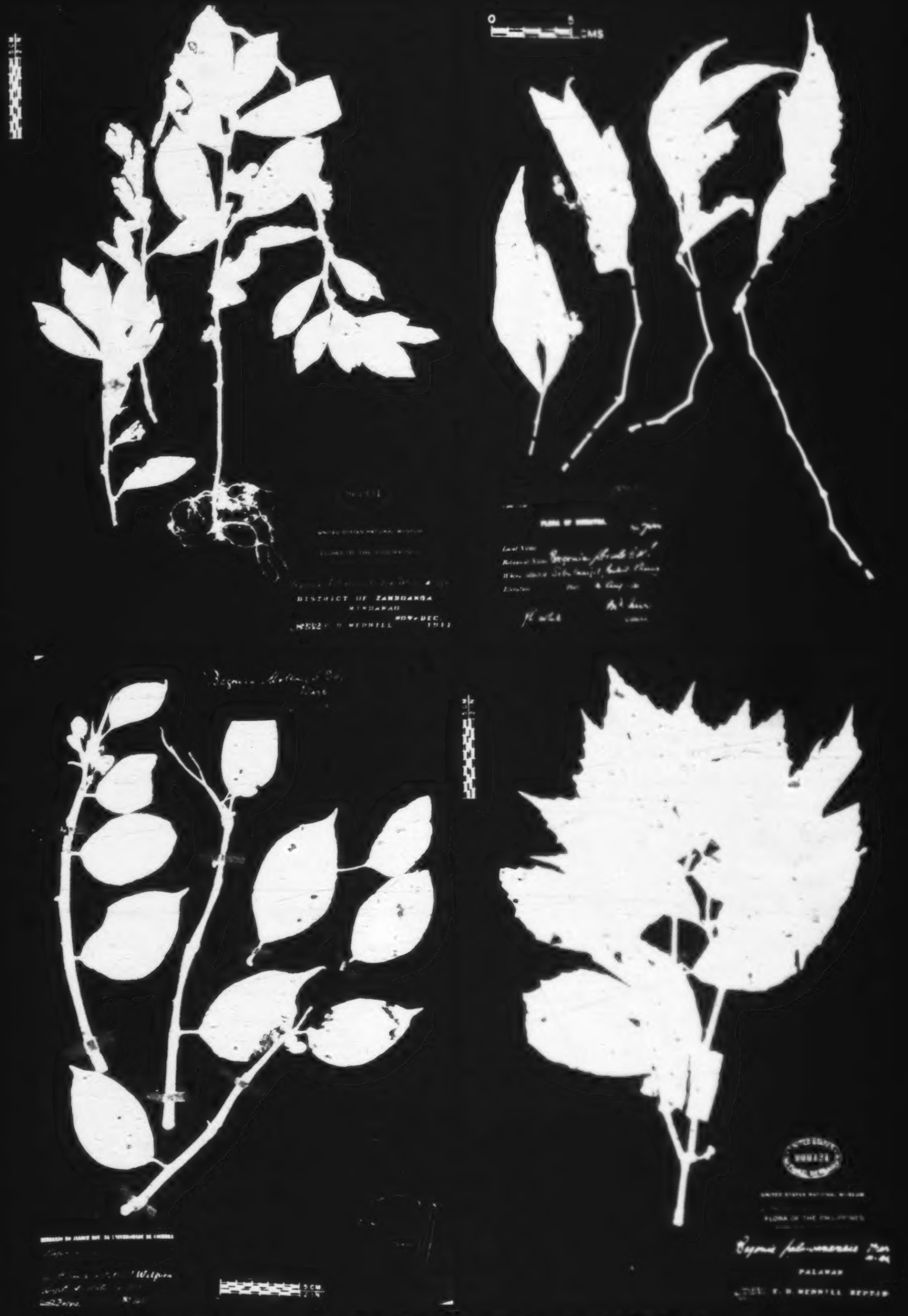

Plantae colombianae
COLOMBIA. Departamento del Valle.
JARDIM BOTANICO DO RIO DE JANEIRO

16.18, *B. cuatrecasasiana;* 16.19, *B. bidentata;* 16.20, *B. bonitoensis;* 16.21, *B. congesta.*

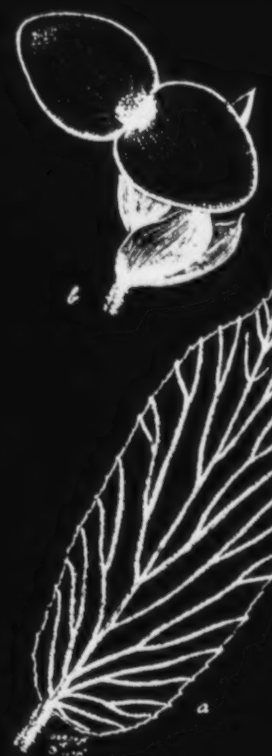
BEST COPY AVAILABLE


FLORA OF ECUADOR
Begonia harlingii L. B. Smith & D.C. Wasshausen
Paratype
Gunnar Harling
Museum botanicum Berolinense.

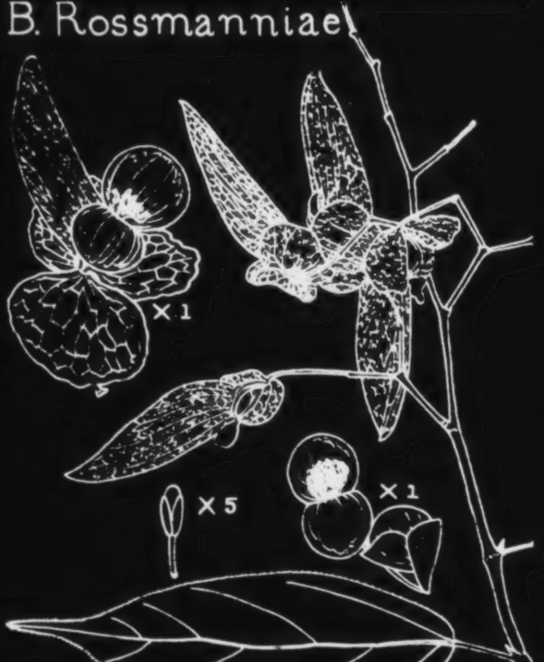
16.22, *B. harlingii;* 16.23, *B. furfuracea;* 16.24, *B. rhopalocarpa;* 16.25, *B. brevipes.*


0 5 CMS
DISTRICT OF ZAMBOANGA
MINDANAO
FLORA OF BORNEO
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
PALAWAN
5 CM

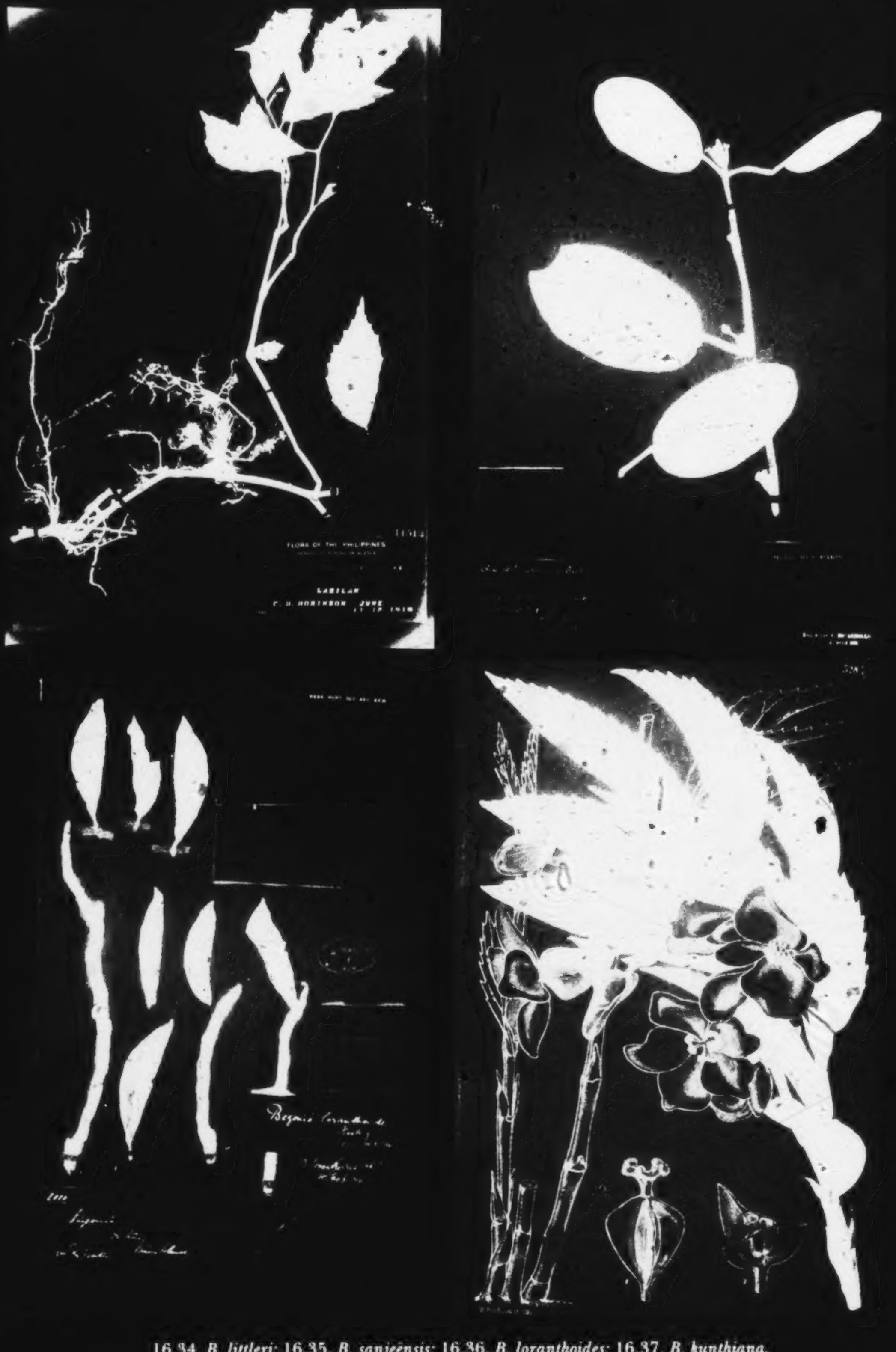
16.26, *B. elatostematoides;* 16.27, *B. flexula;* 16.28, *B. molleri;* 16.29, *B. palawanensis.*



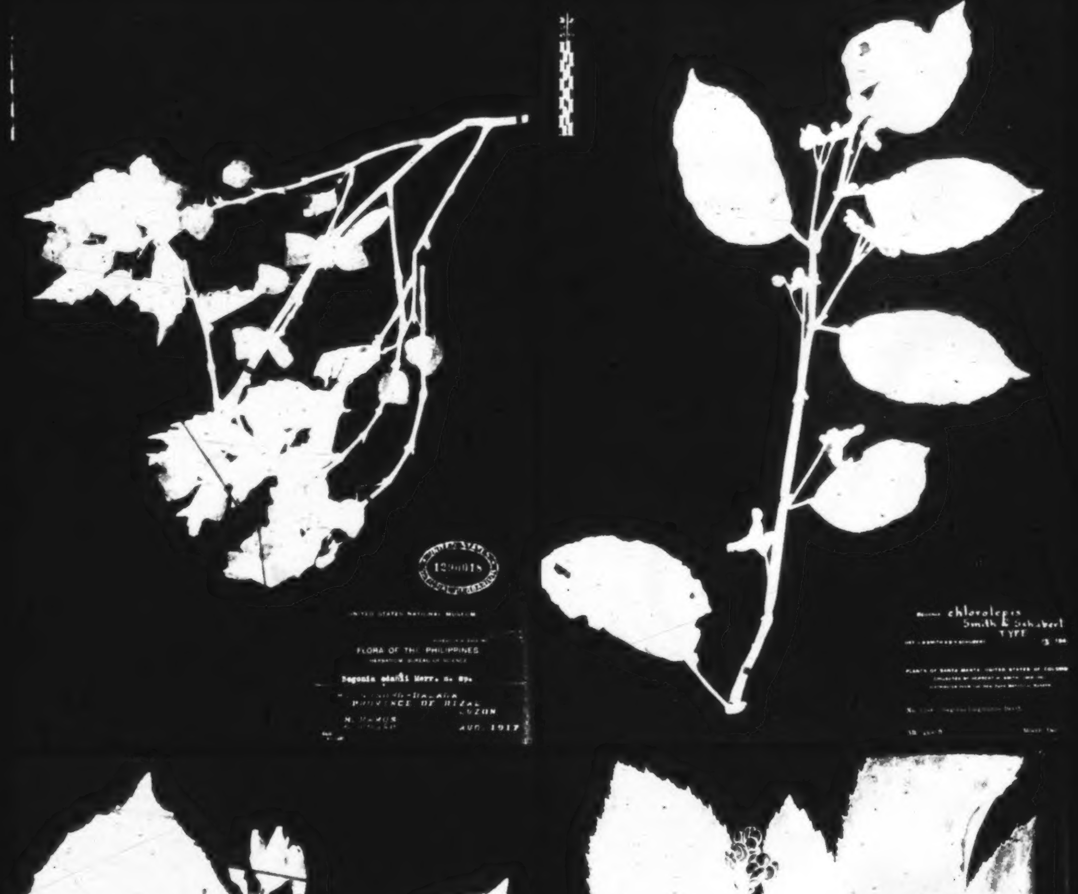
HERB MUS PARIS
TYPE


B. Rossmanniae
×1
×1
×5
×1/2

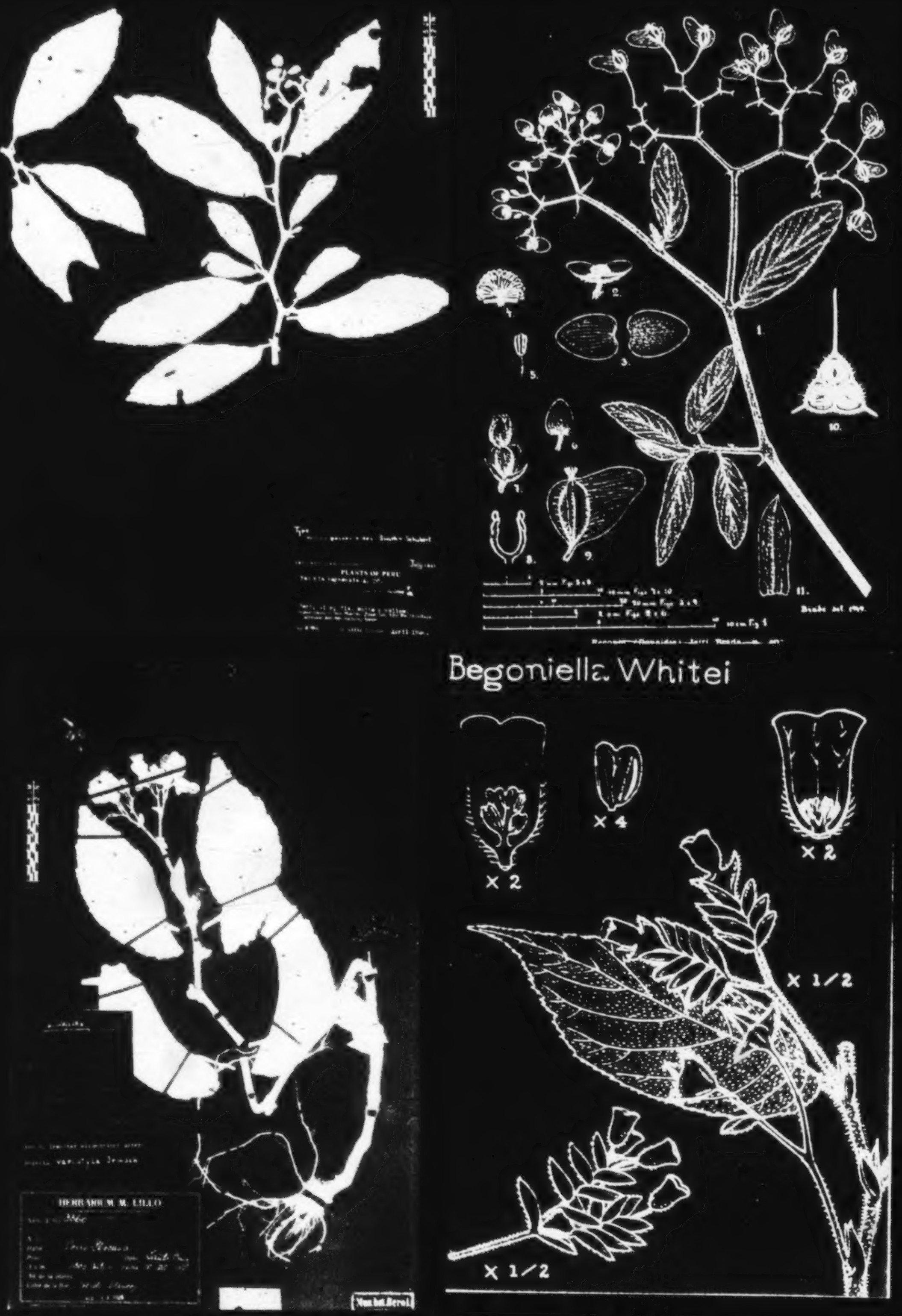
16.30, *B. calliantha;* 16.31, *B. tanala;* 16.32, *B. edmundoi;* 16.33, *B. rossmanniae.*


FLORA OF THE PHILIPPINES

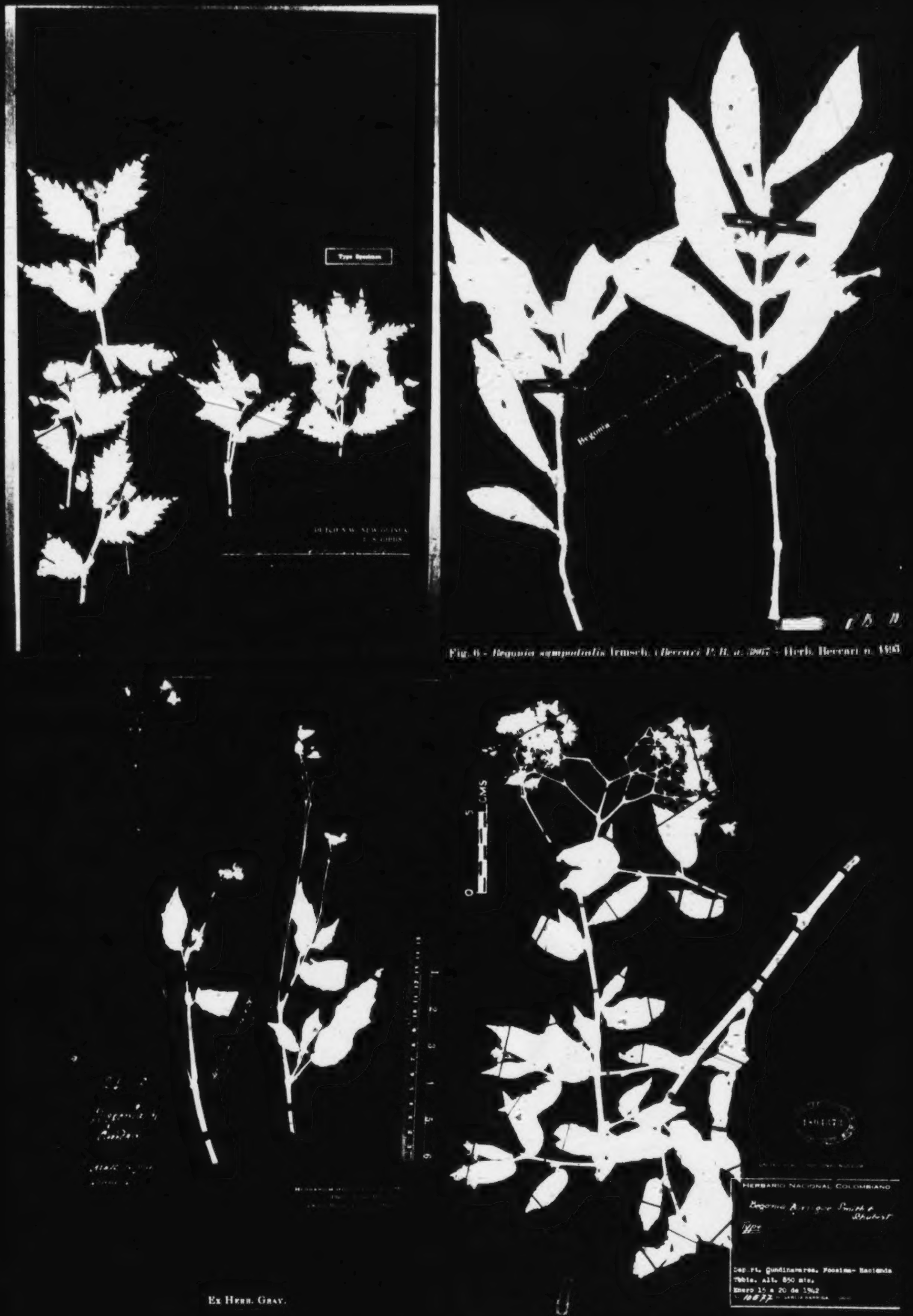
16.34, *B. littleri;* 16.35, *B. sanjeensis;* 16.36, *B. loranthoides;* 16.37, *B. kunthiana.*


1290018
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
Begonia edanii Merr. n. sp.
PROVINCE OF RIZAL
LUZON
AUG. 1917
chlorolepis
Smith & Schubert
TYPE
Begonia ulmifolia

16.38, *B. edanoi;* 17.1, *B. chlorolepis;* 17.2, *B. raimondii;* 17.3, *B. ulmifolia.*


PLANTS OF PERU
Begoniella Whitei
× 2
× 4
× 2
× 1/2
× 1/2
HERBARIUM M. LILLO

17.4, *B. gesnerioides;* 17.5, *B. jairii;* 17.6, *B. varistyla;* 17.7, *B. oliveri.*


Type Specimen
DUTCH N.W. NEW GUINEA
L. S. GIBBS
Begonia
Fig. 6 - Begonia sympodialis Irmsch. (Beccari P. B. n. 3967 - Herb. Beccari n. 3393)
CMS
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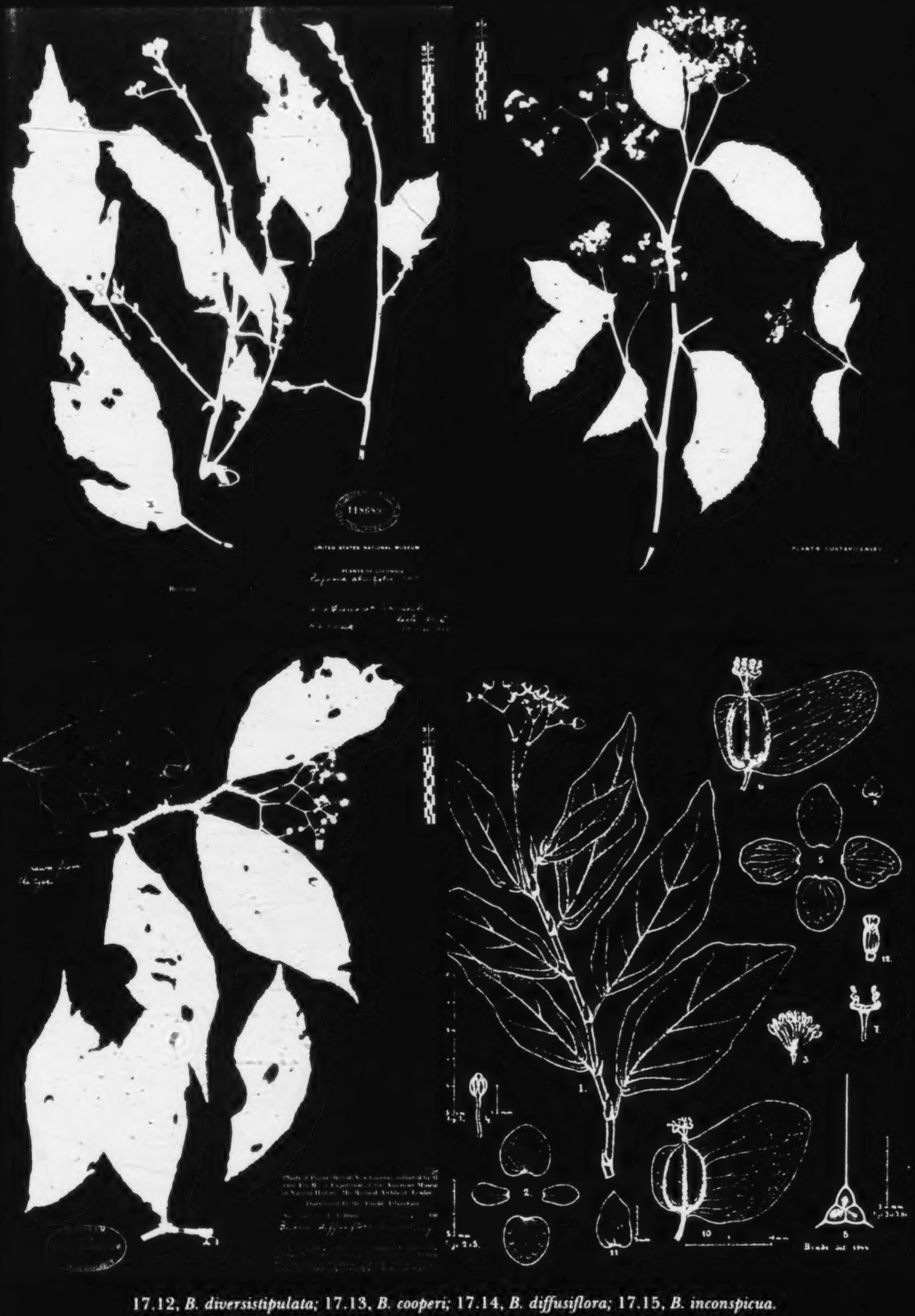
Ex Herb. Gray.
HERBARIO NACIONAL COLOMBIANO
Begonia Barrigae Smith & Schubert
Type
Dep.rt. Cundinamarca, Fosaima- Hacienda
Tabla. alt. 850 mts.
Enero 15 a 20 de 1942
10677

17.8, *Symbegonia arfakensis;* 17.9, *B. sympodialis;* 17.10, *B. decandra;* 17.11, *B. barrigae.*


UNITED STATES NATIONAL MUSEUM
PLANTS OF COLOMBIA
PLANTAE COSTARICENSES
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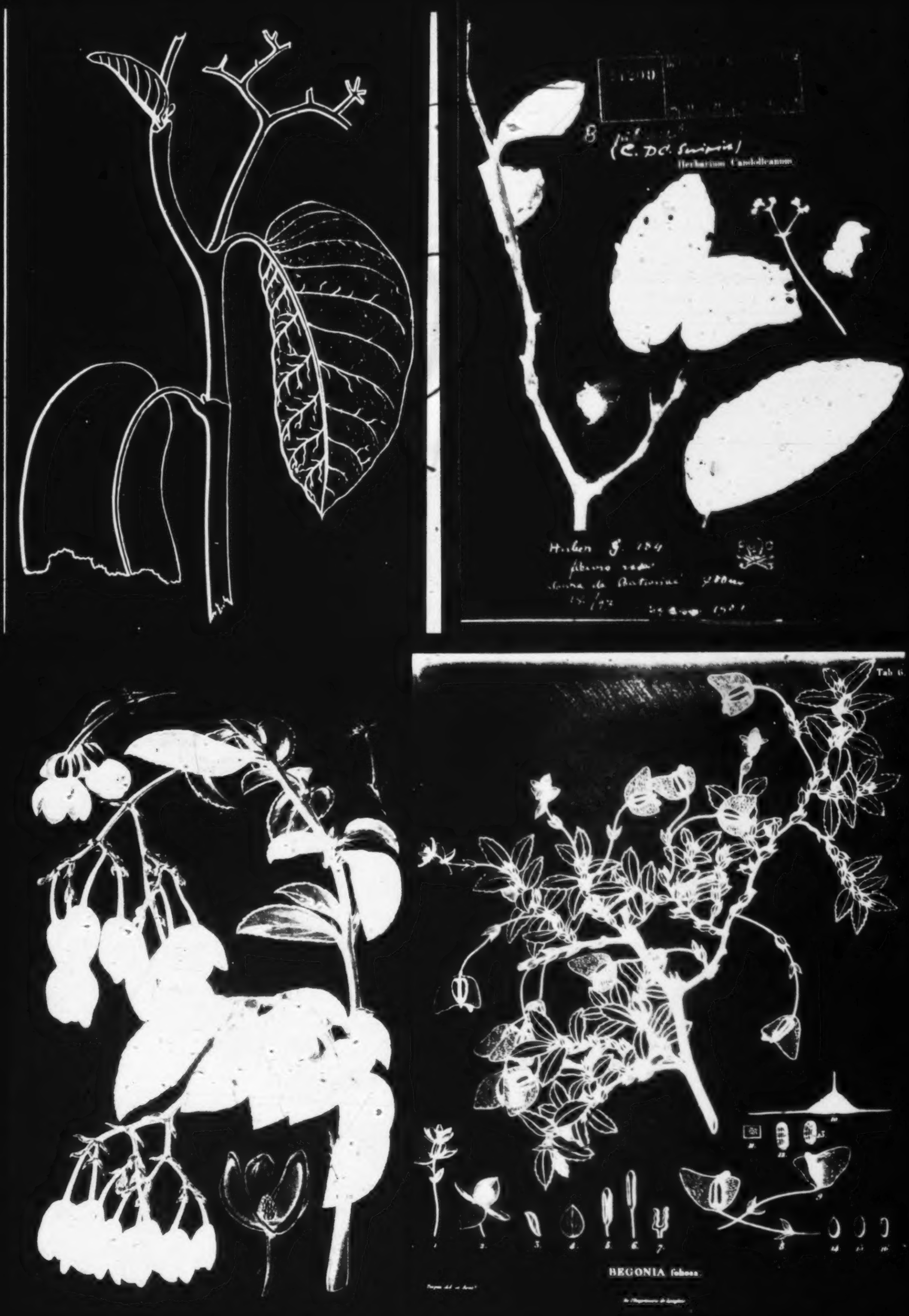
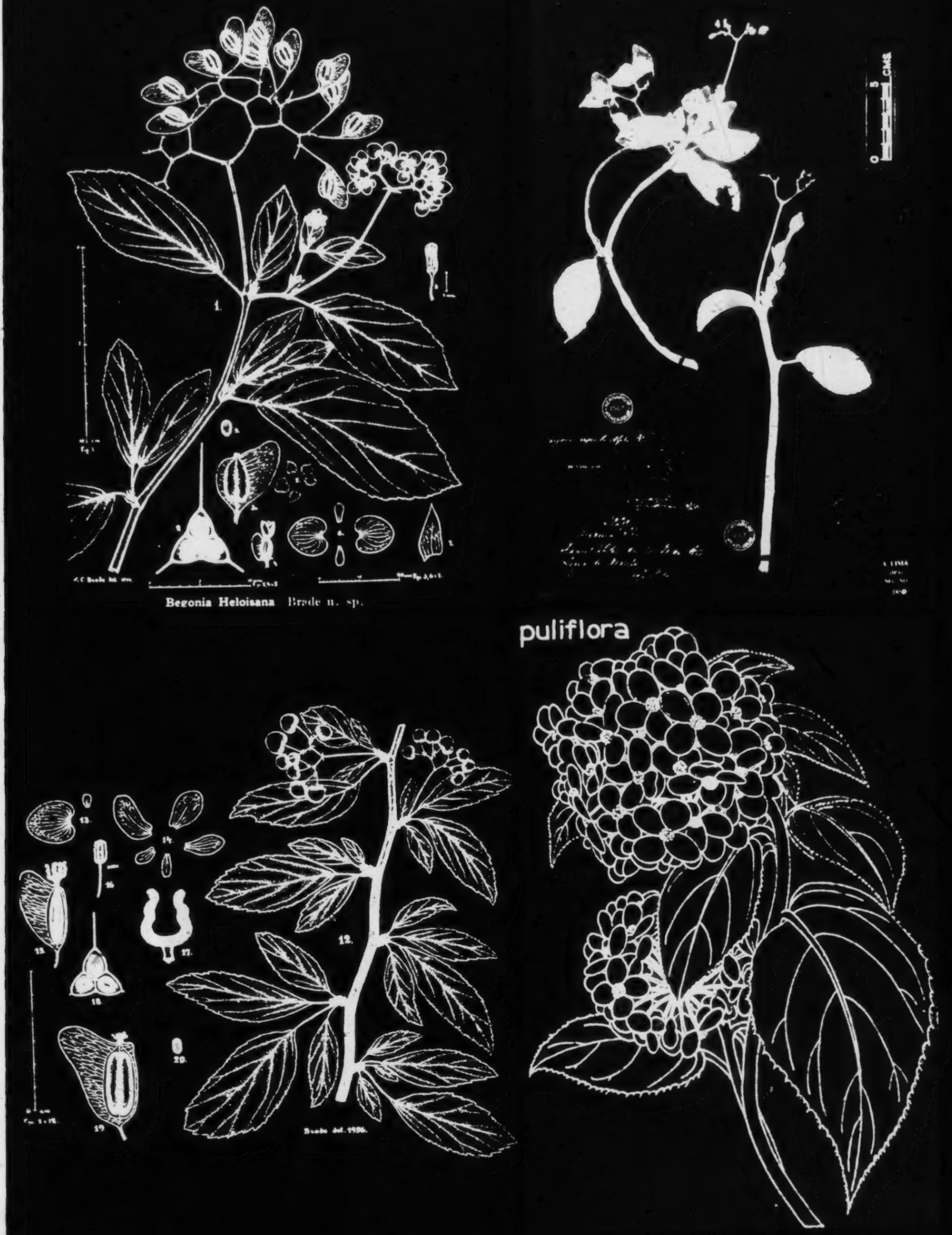
17.12, *B. diversistipulata;* 17.13, *B. cooperi;* 17.14, *B. diffusiflora;* 17.15, *B. inconspicua.*


(C. DC. scripsit)
Herbarium Candolleanum
Tab 6
BEGONIA foliosa

17.16, *B. arborescens;* 17.17, *B. pilderifolia;* 17.18, *B. fuchsioides;* 17.19, *B. foliosa.*


Begonia Heloisana Brade n. sp.
puliflora
Brade del. 1936.
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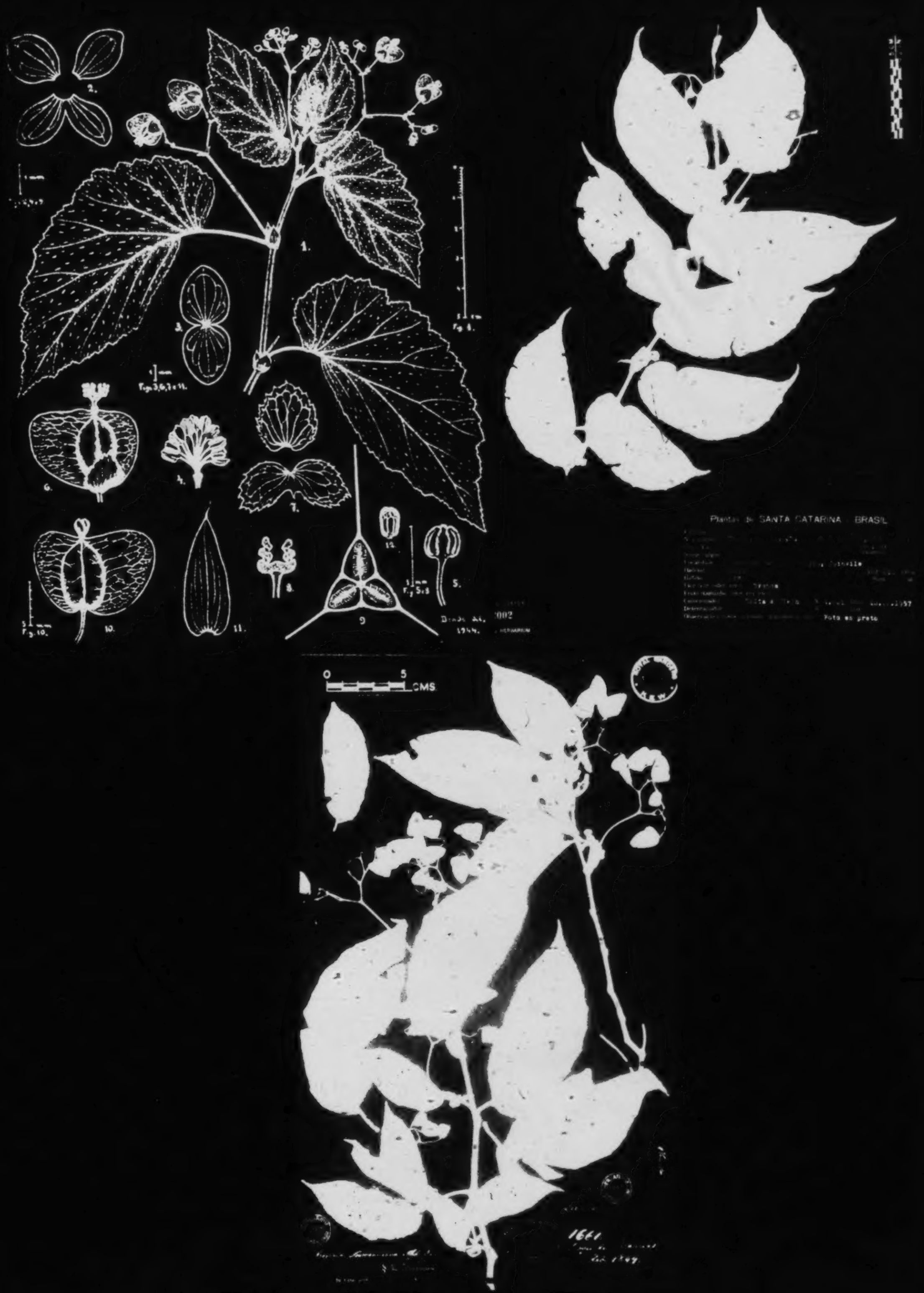
CMS

17.20, *B. heloisana;* 17.21, *B. saxicola;* 17.22, *B. egleri;* 17.23, *B. opuliflora.*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1 mm
Fig. 8.
Fig. 10.
Plantas de SANTA CATARINA — BRASIL
Foto em preto
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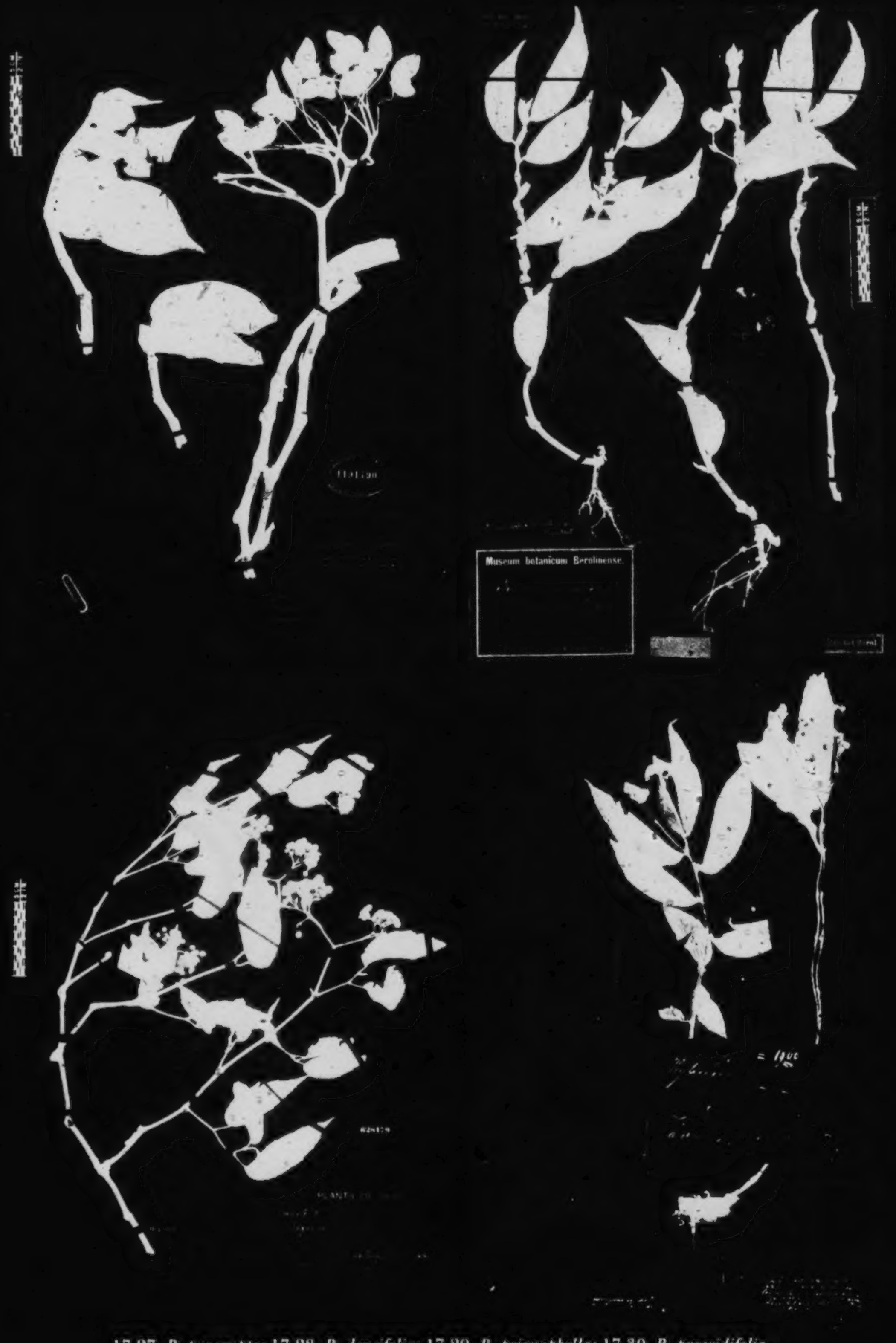
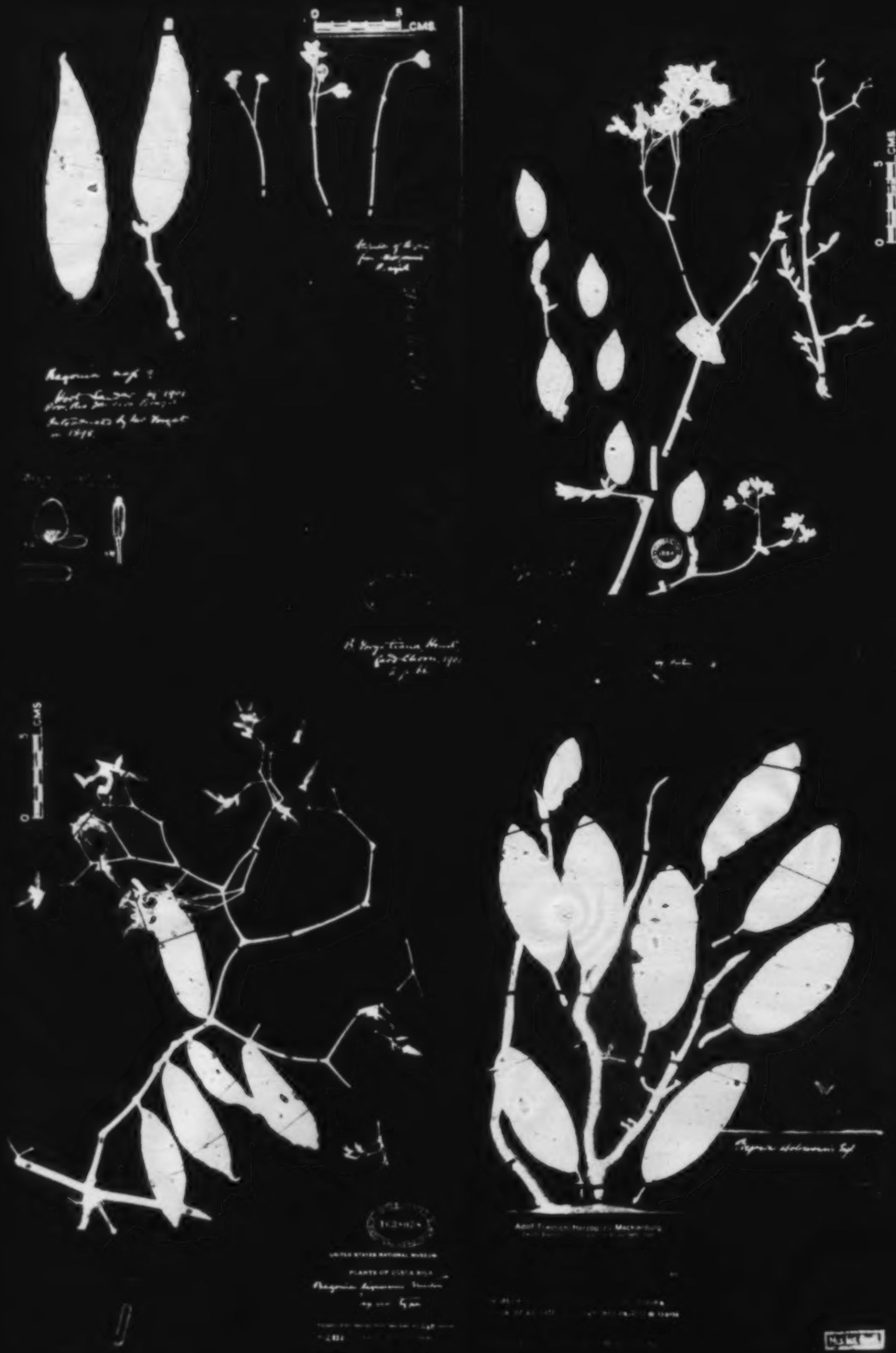
CMS
1661

17.24, *B. alemanii;* 17.25, *B. konder-reisiana;* 17.26, *B. seemanniana.*


Museum botanicum Berolinense.

17.27, *B. praerupta;* 17.28, *B. densifolia;* 17.29, *B. prionophylla;* 17.30, *B. procridifolia.*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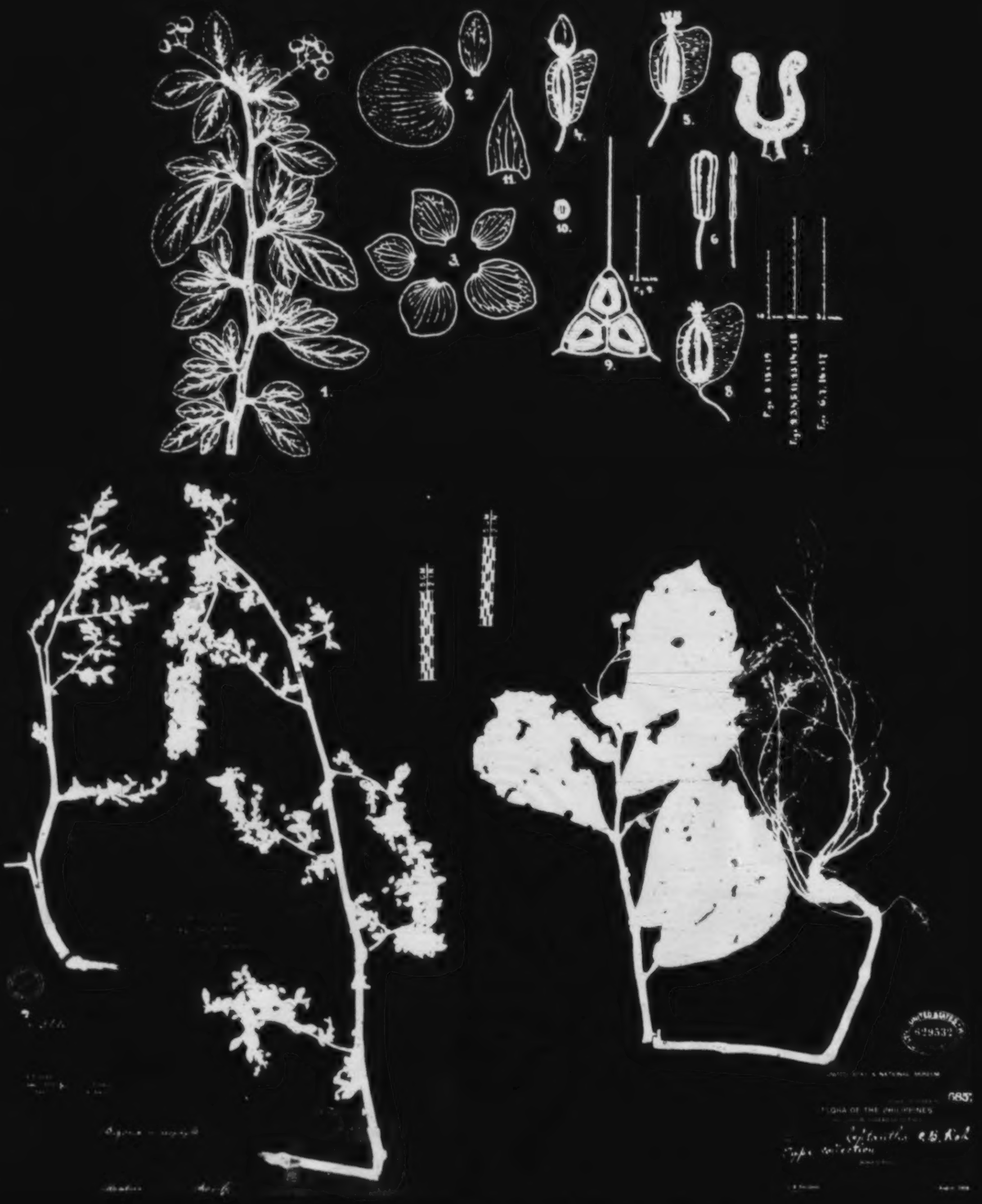
CMS
CMS
UNITED STATES NATIONAL MUSEUM
PLANTS OF COSTA RICA
Adolf Friedrich Herzog zu Mecklenburg

17.31, *B. forgetiana;* 17.32, *B. multiflora;* 17.33, *B. lignescens;* 18.1, *B. ebolowensis.*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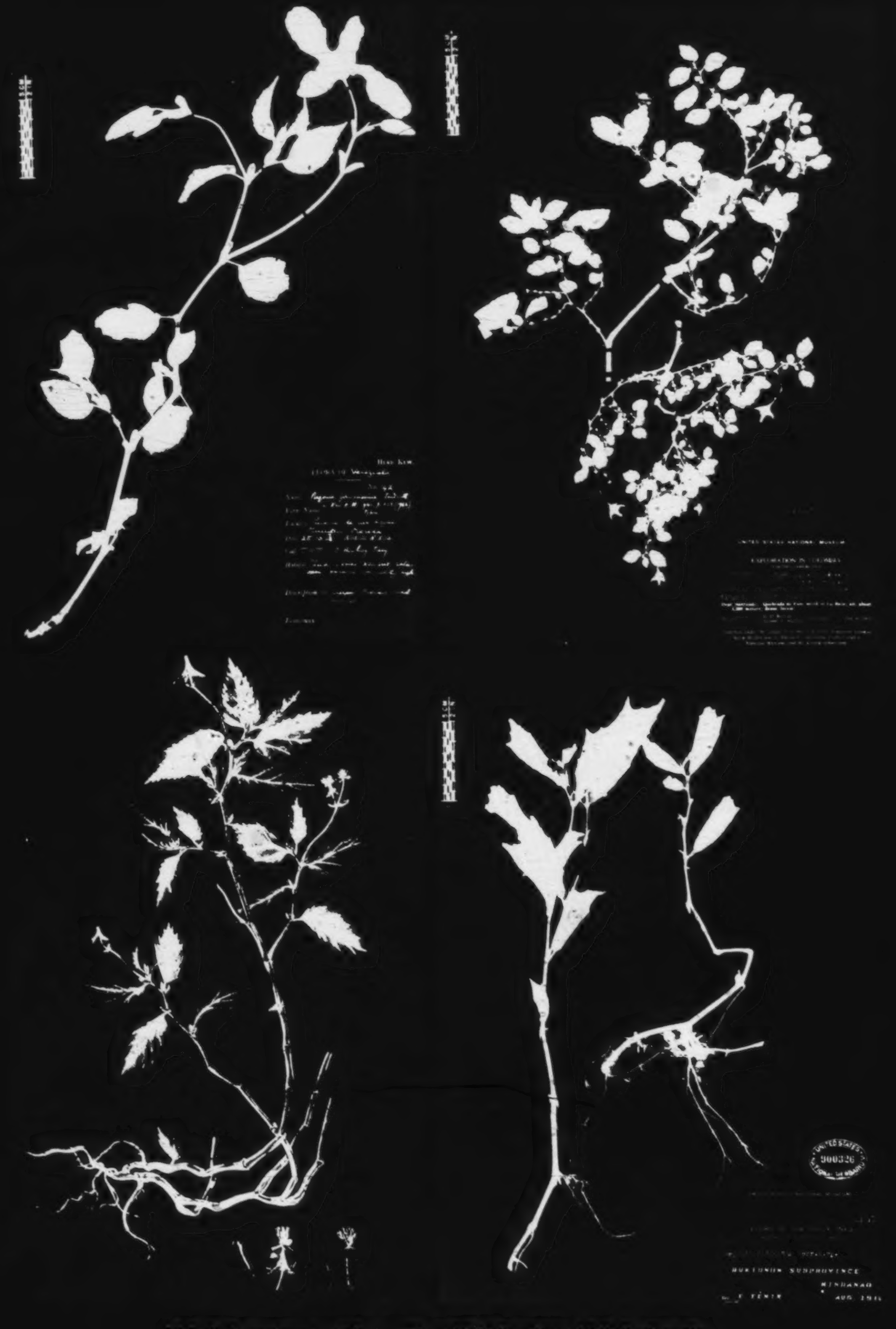
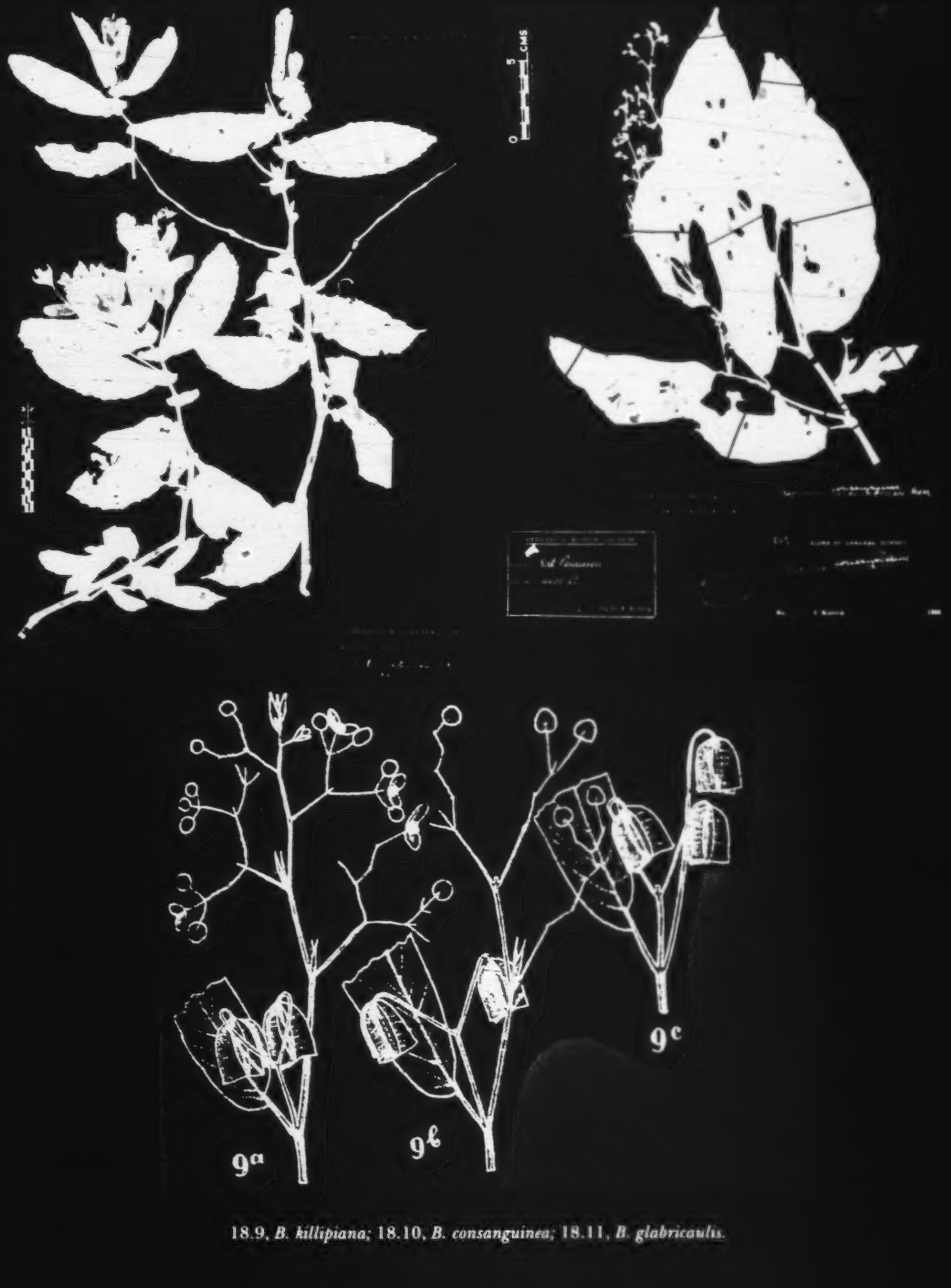
829532
FLORA OF THE PHILIPPINES
leptantha C.B. Rob.
Type collection

18.3 (top), *B. burle-marxii;* 18.2, *B. microphylla;* 18.4, *B. leptantha.*


UNITED STATES
900326
BUKIDNON SUBPROVINCE
MINDANAO

18.5, *B. formosissima;* 18.6, *B. diffusa;* 18.7, *B. urticae;* 18.8, *B. oligantha.*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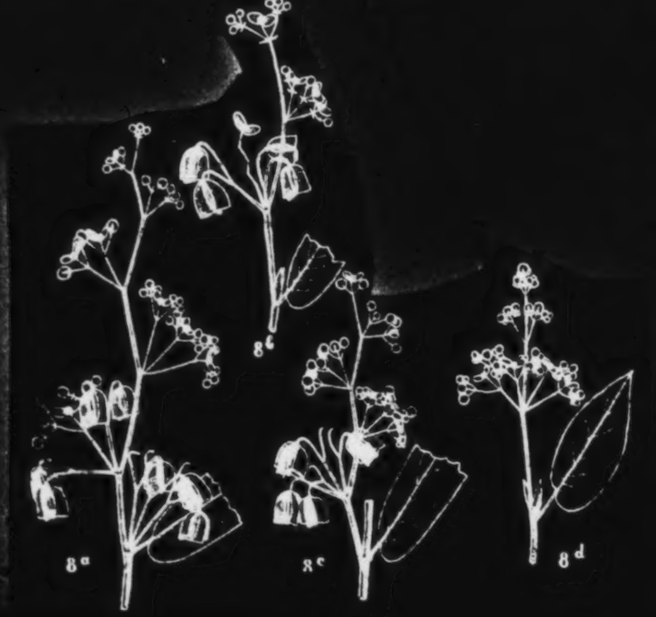
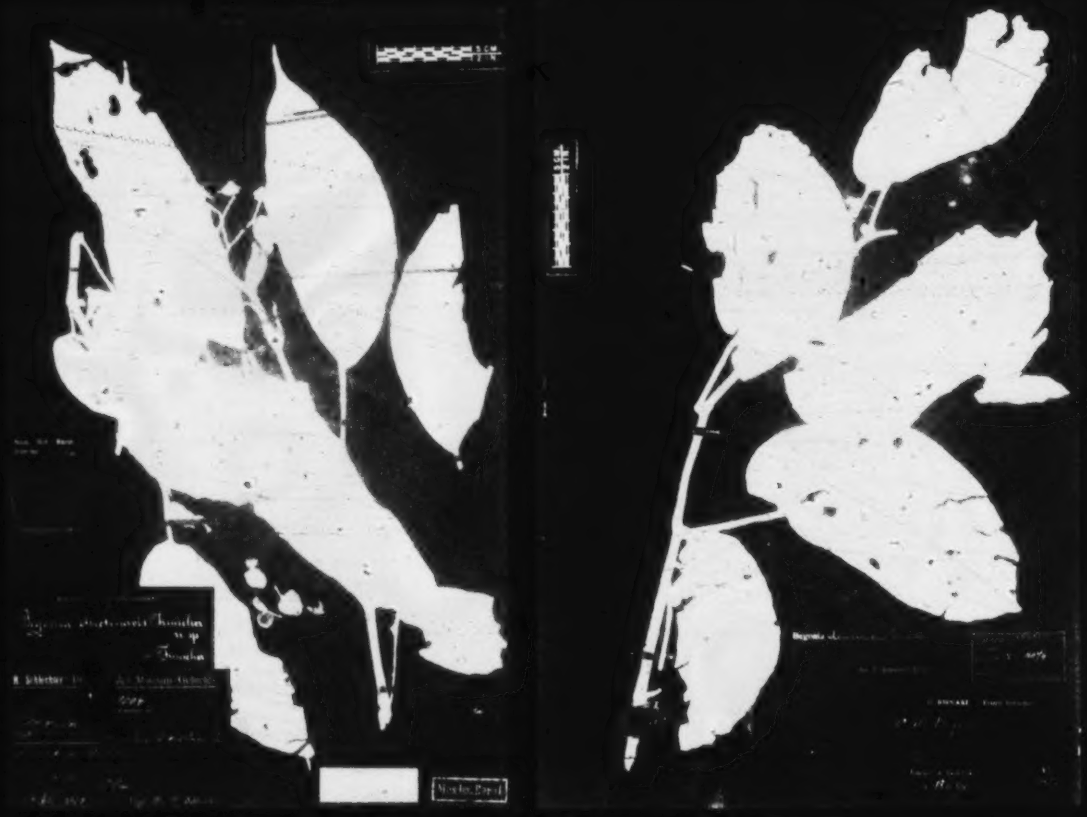
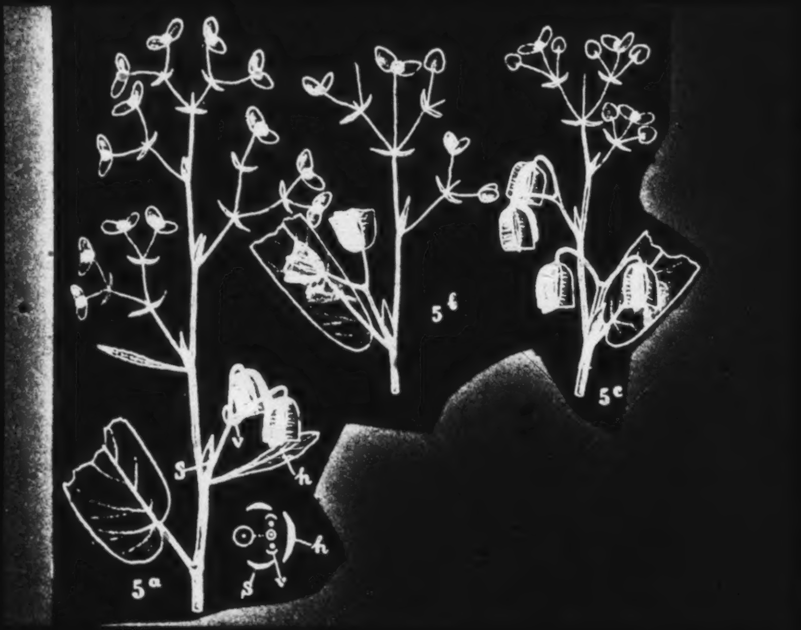
CMS
9a
9b
9c

18.9, *B. killipiana;* 18.10, *B. consanguinea;* 18.11, *B. glabricaulis.*





18.13 (top), *B. naumoniensis;* 18.12, *B. strictinervis;* 18.14, *B. densiretis.*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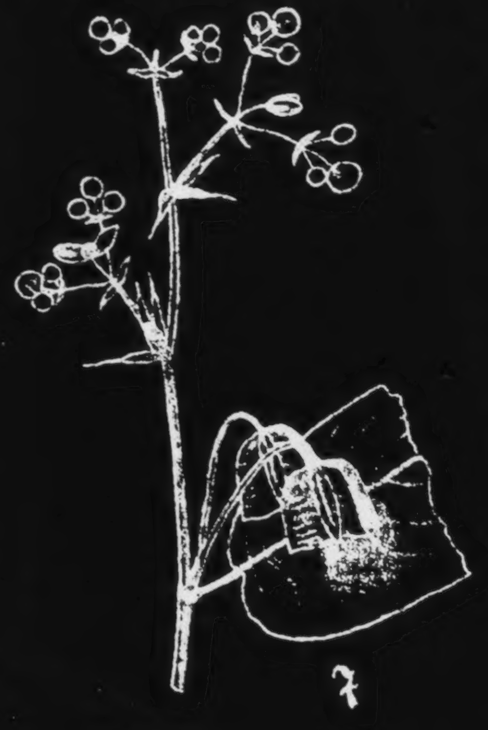

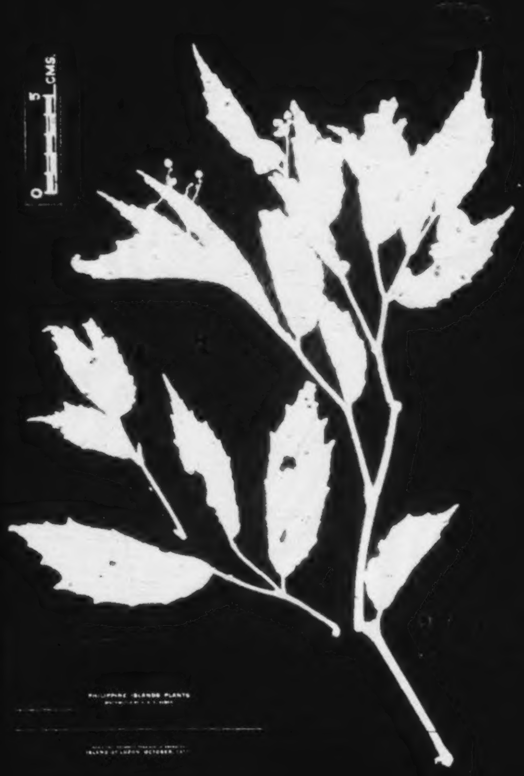
CMS.
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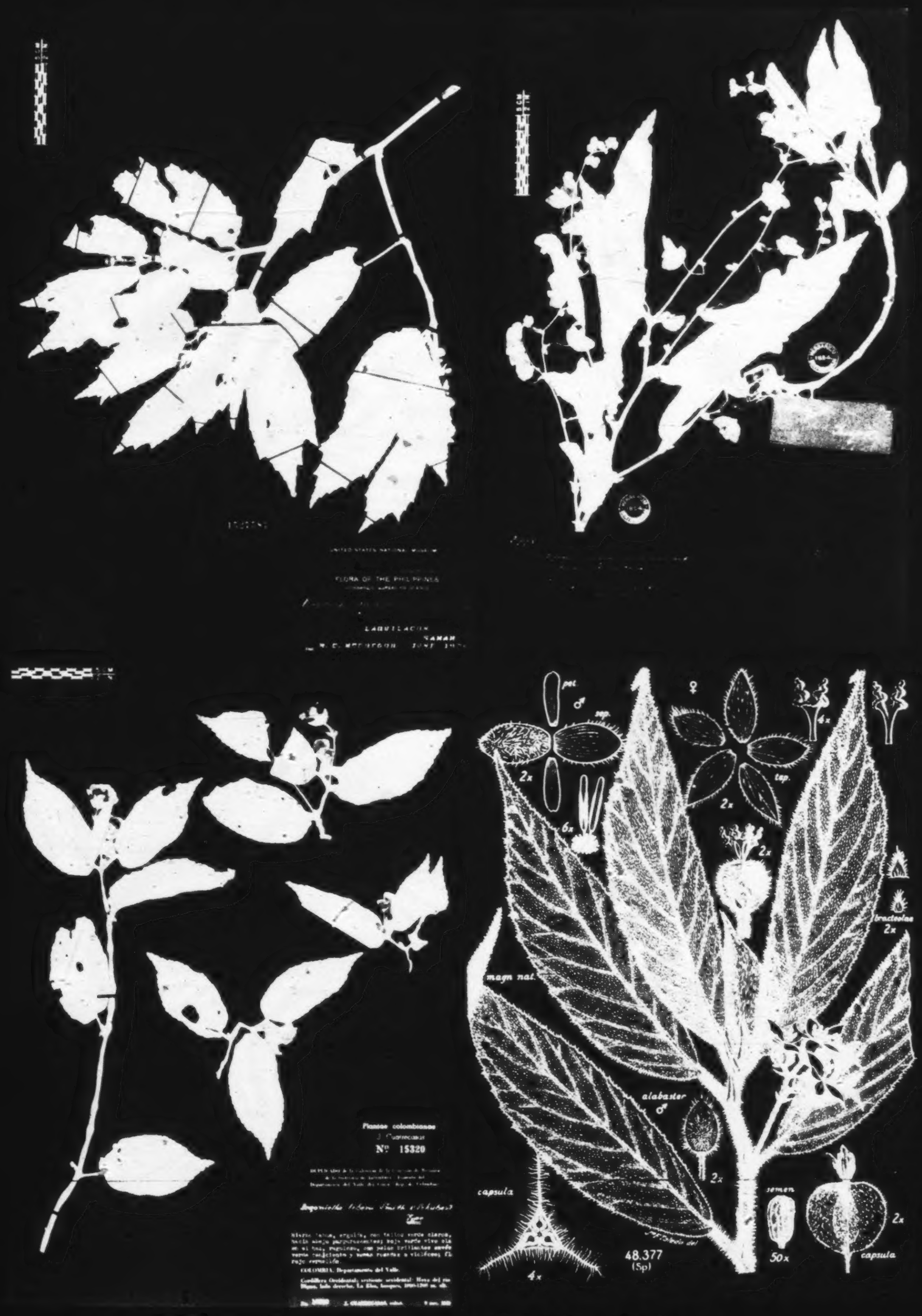
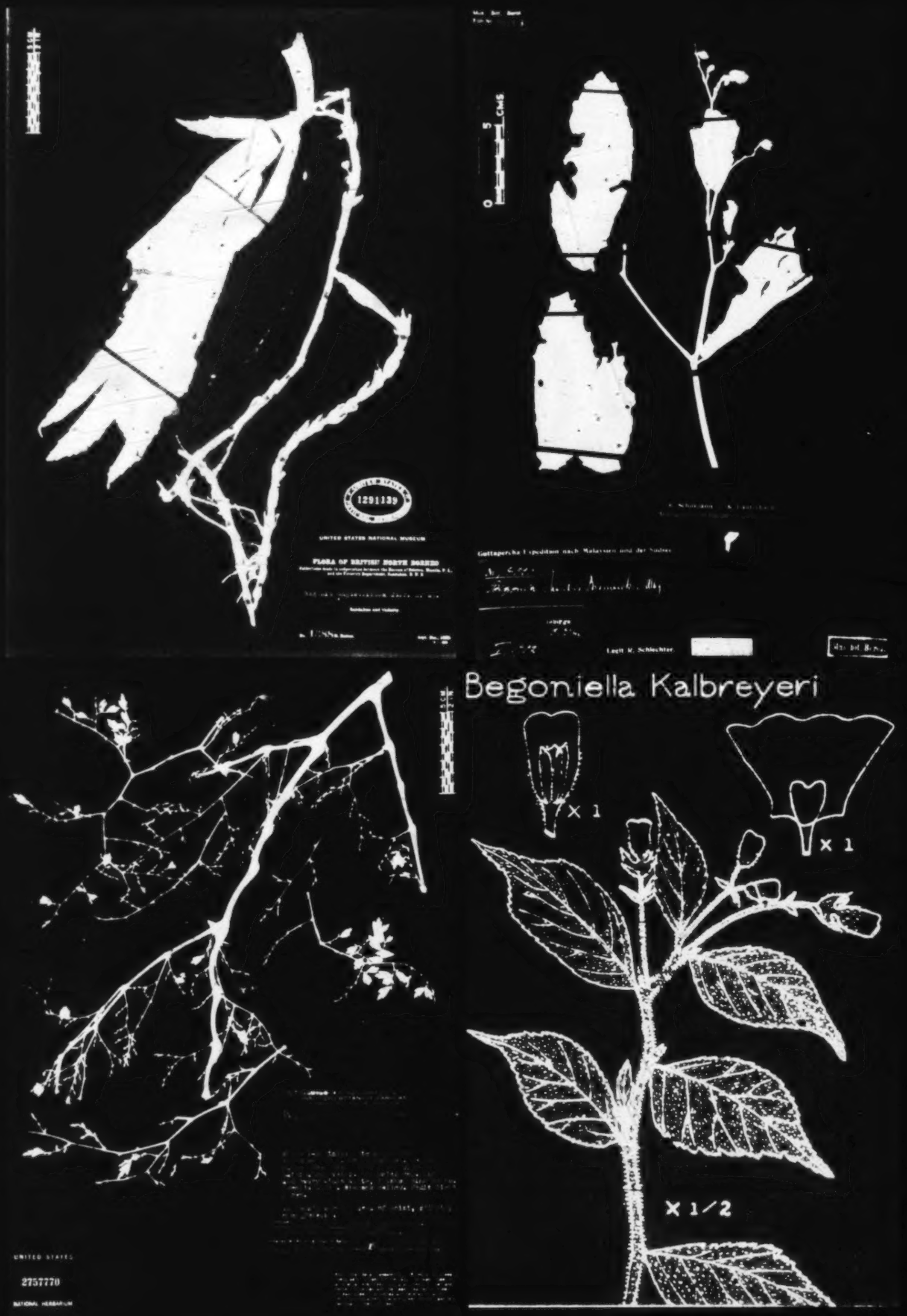
PHILIPPINE ISLANDS PLANTS

18.16 (top), *B. hirsuticaulis;* 18.15, *B. gilgiana;* 18.17, *B. sorsogonensis.*


UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
SAMAR
Plantae colombianae
Nº 15320
COLOMBIA, Departamento del Valle.
pet.
♂
sep.
2x
6x
♀
4x
tep.
2x
2x
bracteolae
2x
magn nat.
alabaster
♂
2x
capsula
4x
48.377
(Sp)
semen
50x
2x
capsula

18.18, *B. samarensis;* 18.19, *B. buddleiifolia;* 18.20, *B. libera;* 18.21, *B. rufosericea.*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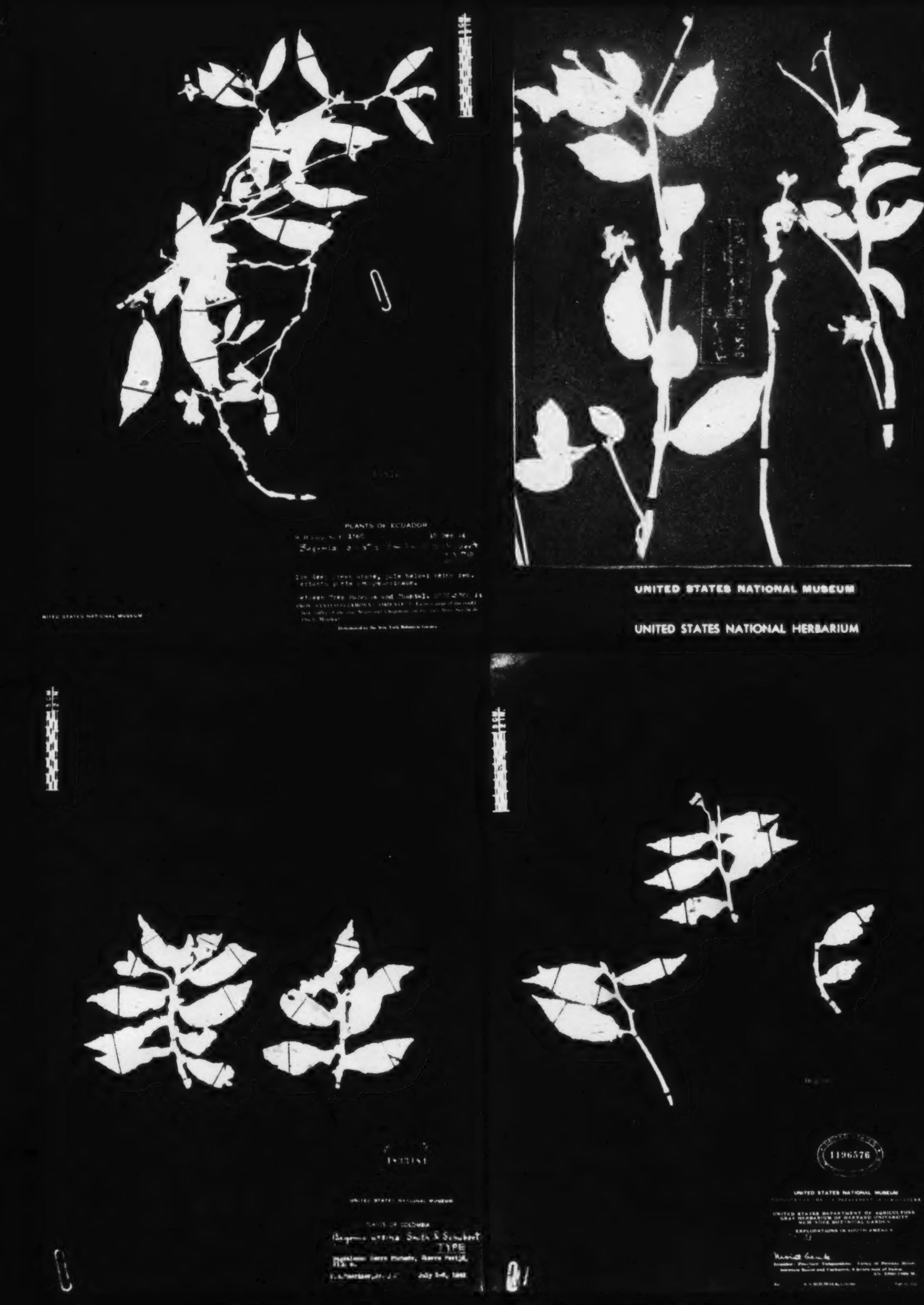
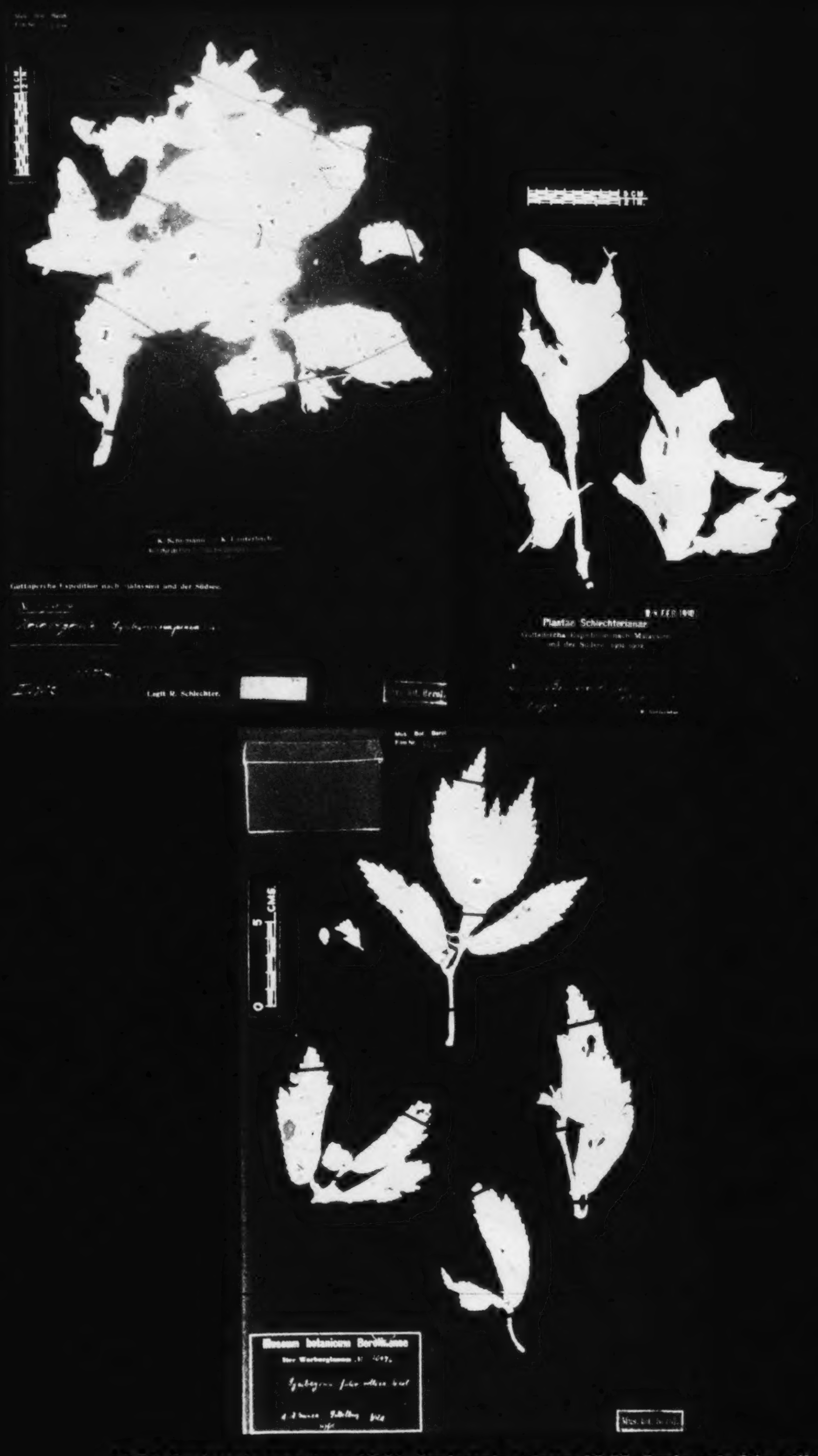
1291139
UNITED STATES NATIONAL MUSEUM
FLORA OF BRITISH NORTH BORNEO
Guttapercha Expedition nach Malassien und der Südsee
Legit R. Schlechter
Begoniella Kalbreyeri
× 1
× 1
× 1/2
UNITED STATES
2757770
NATIONAL HERBARIUM

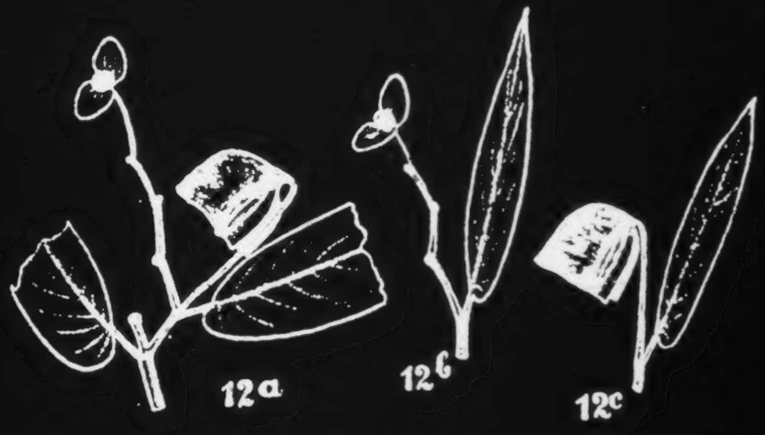
18.22, *B. angustilimba;* 18.23, *B. montis-bismarckii;* 18.24, *B. confinis;* 18.25, *B. kalbreyeri.*

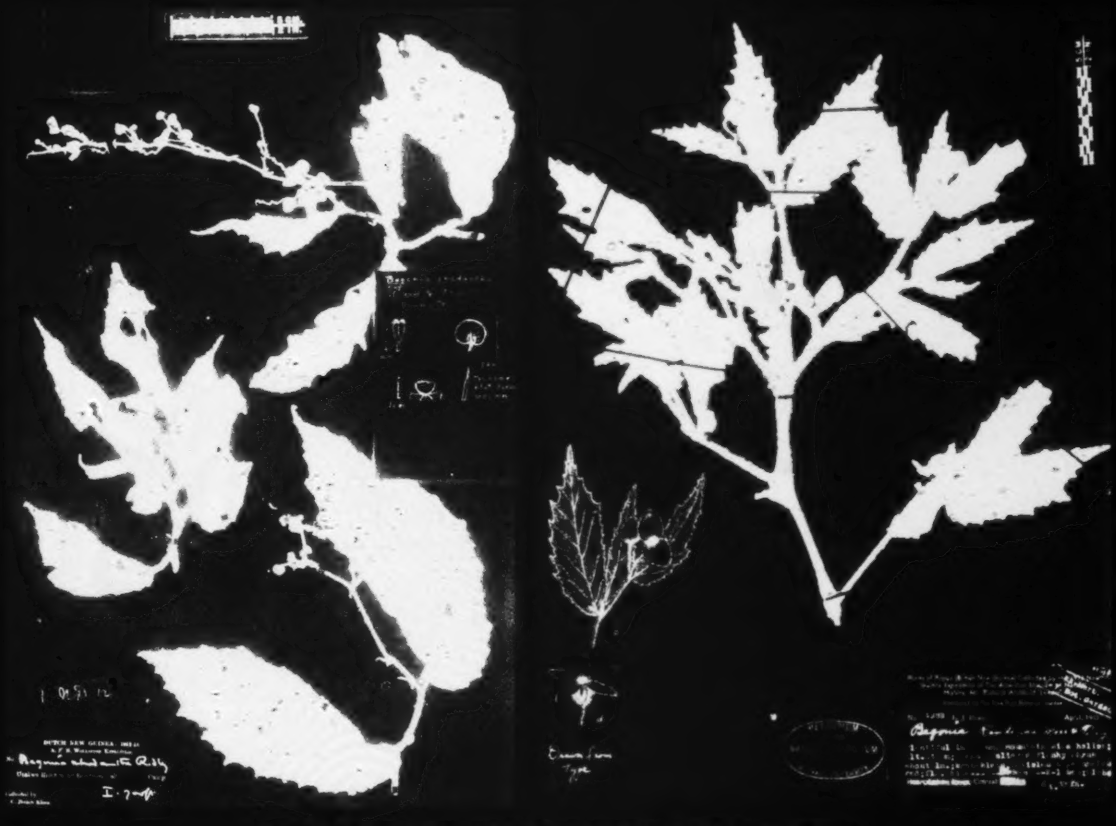

PLANTS OF ECUADOR
UNITED STATES NATIONAL MUSEUM
UNITED STATES NATIONAL MUSEUM
UNITED STATES NATIONAL HERBARIUM
UNITED STATES NATIONAL MUSEUM
PLANTS OF COLOMBIA
Begonia ursina Smith & Schubert
TYPE
1196576
UNITED STATES NATIONAL MUSEUM
UNITED STATES DEPARTMENT OF AGRICULTURE
GRAY HERBARIUM OF HARVARD UNIVERSITY
NEW YORK BOTANICAL GARDEN
EXPLORATIONS IN SOUTH AMERICA

18.26, *B. valvata;* 18.27, *B. antioquiensis;* 18.28, *B. ursina;* 18.29, *B. tetrandra.*

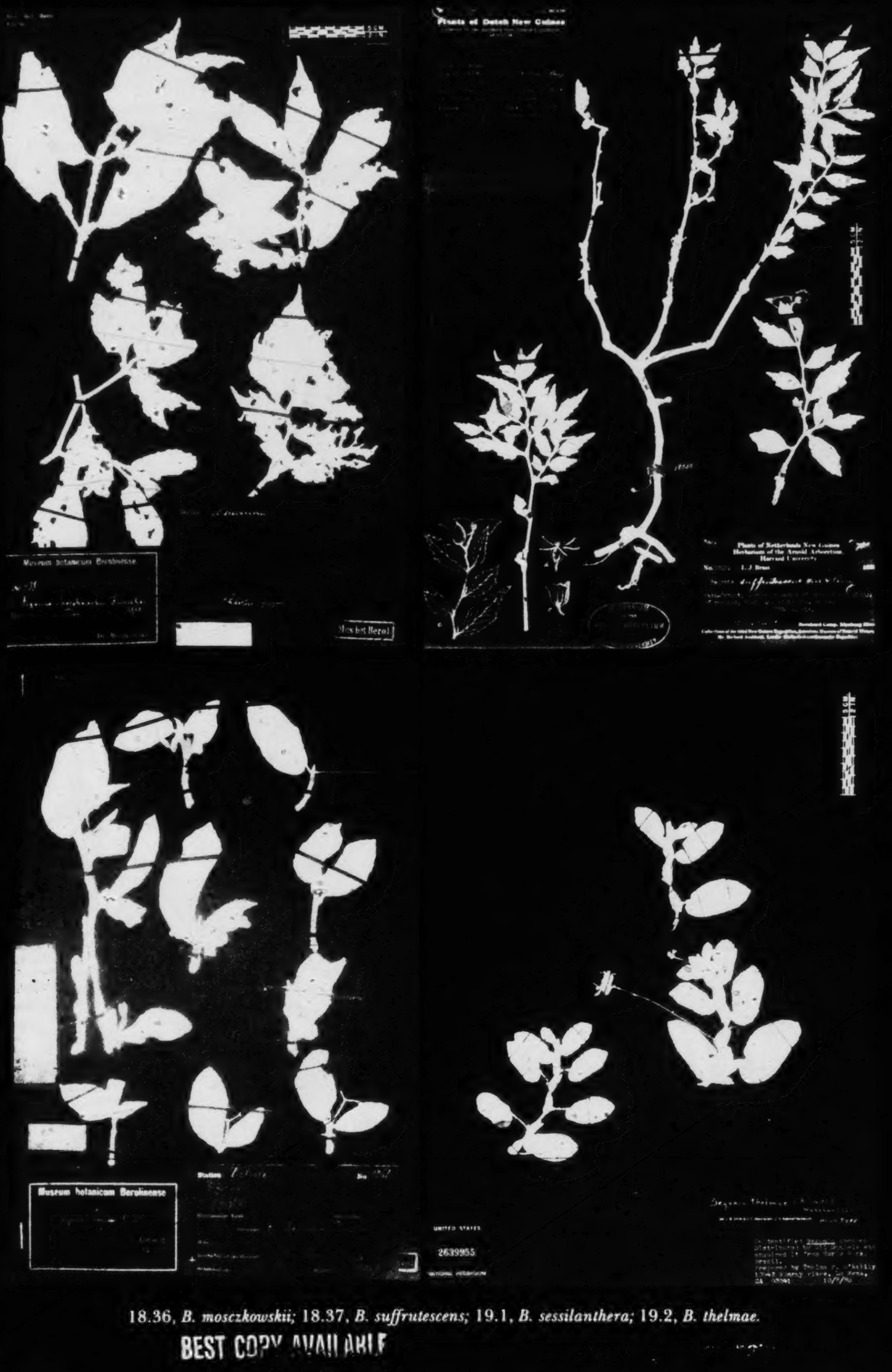

Guttapercha Expedition nach Malaysien und der Südsee.
Legit R. Schlechter.
Plantae Schlechterianae
Museum botanicum Berolinense
5 CMS.

18.30, *Symbegonia sanguinea;* 18.31, *Symbegonia strigosa;* 18.32, *Symbegonia fulvo-villosa.*

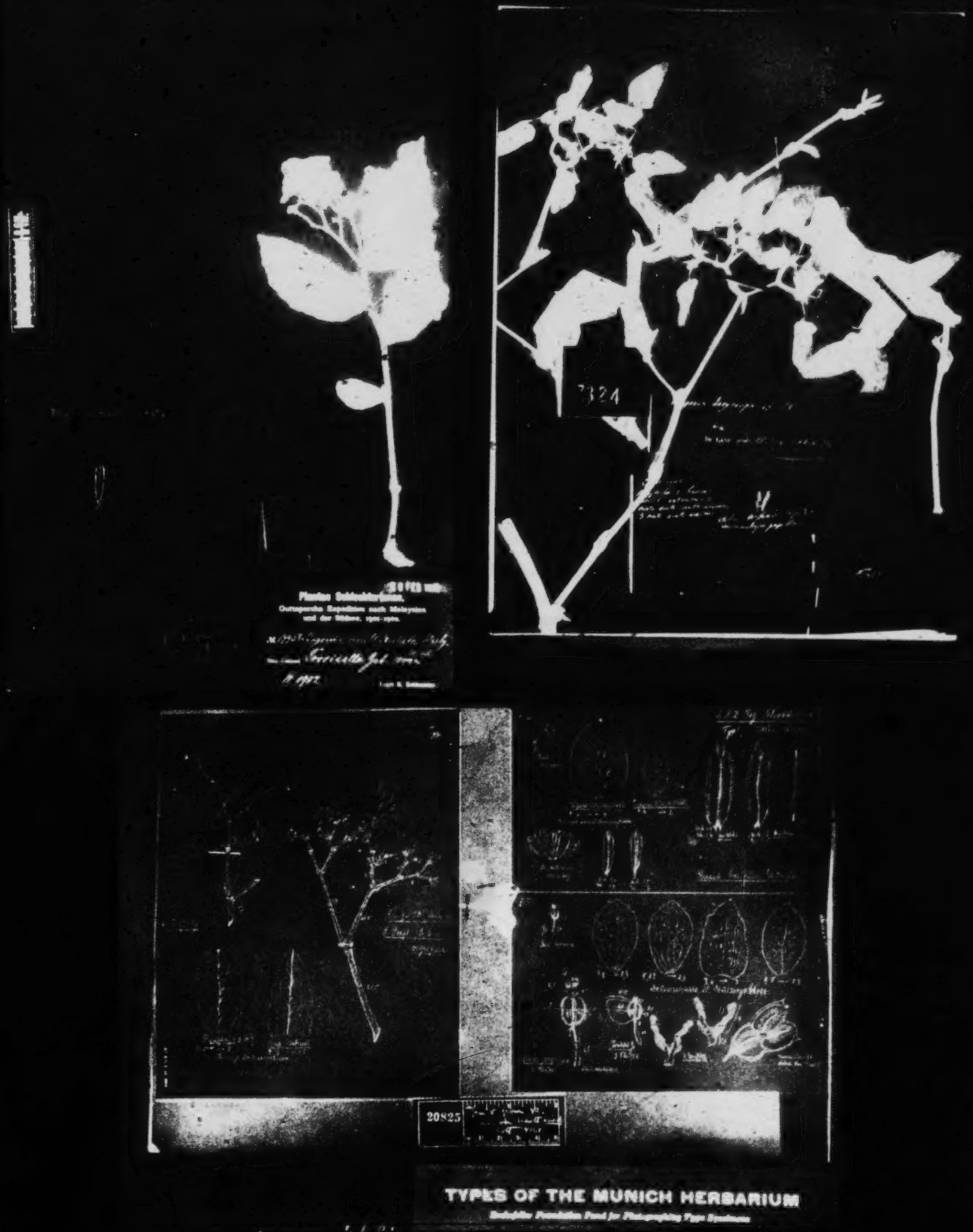




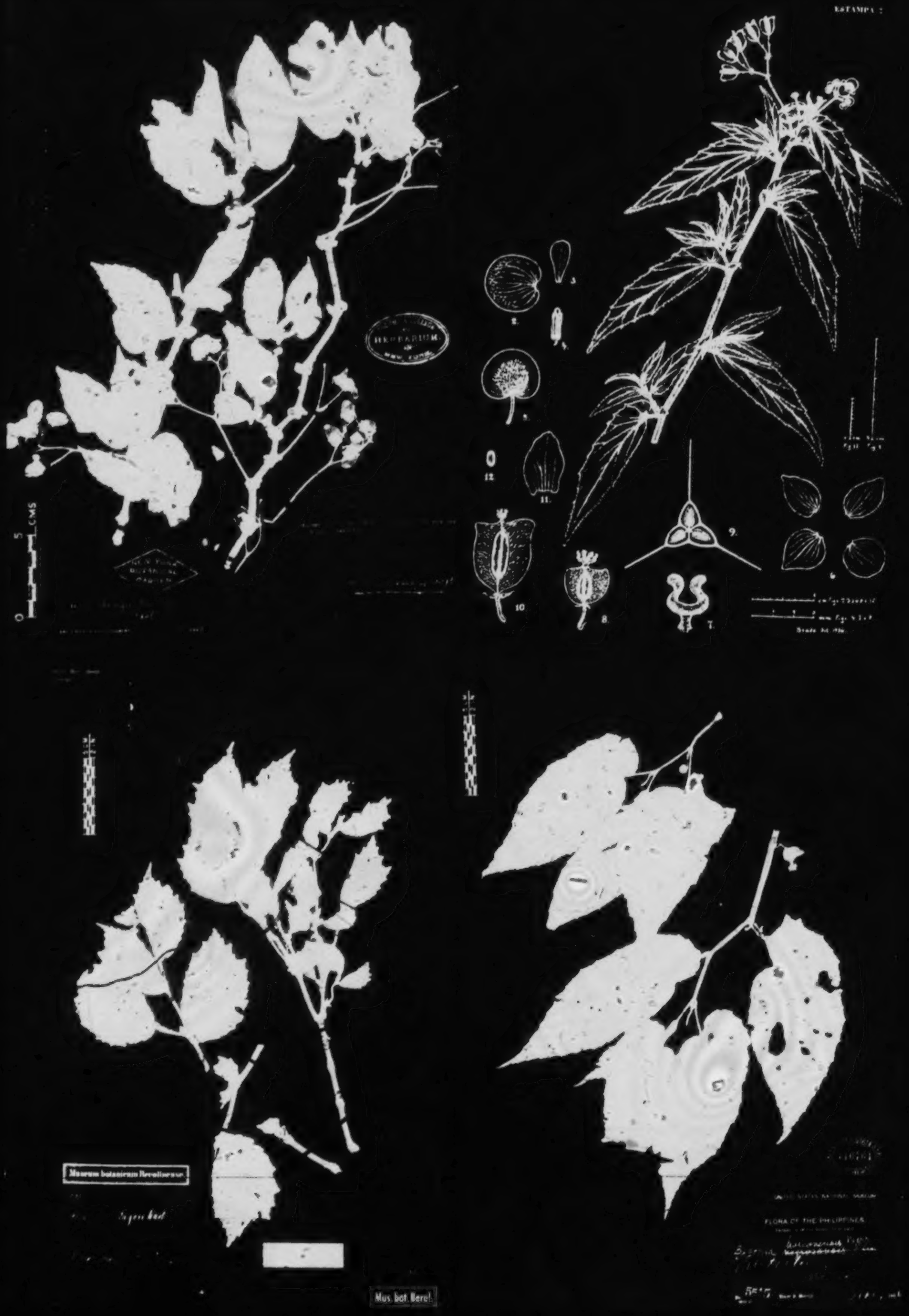
18.33, *B. malmquistiana;* 18.34, *B. rhodantha;* 18.35, *B. randiana.*



18.36, *B. mosczkowskii*; 18.37, *B. suffrutescens*; 19.1, *B. sessilanthera*; 19.2, *B. thelmae*.


Plantae Schlechterianae.
Guttapercha Expedition nach Malaysien und der Südsee, 1901-1902.
7324
20825
TYPES OF THE MUNICH HERBARIUM

19.3, *B. multidentata;* 19.4, *B. dasycarpa;* 19.5, *B. parvifolia.*


ESTAMPA 2
HERBARIUM
NEW YORK
NEW YORK BOTANICAL GARDEN
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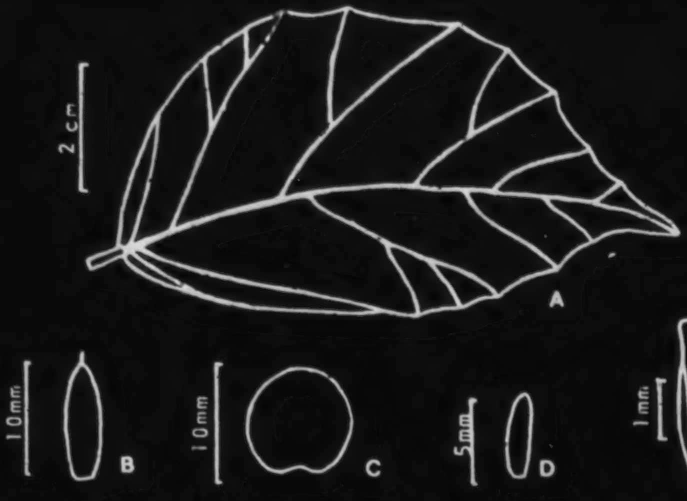
Museum botanicum Berolinense
Mus. bot. Berol.
FLORA OF THE PHILIPPINES

19.6, *B. bangii;* 19.7, *B. insularis;* 19.8, *B. jagorii;* 19.9, *B. halconensis.*


2 cm
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1.0mm
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C
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D
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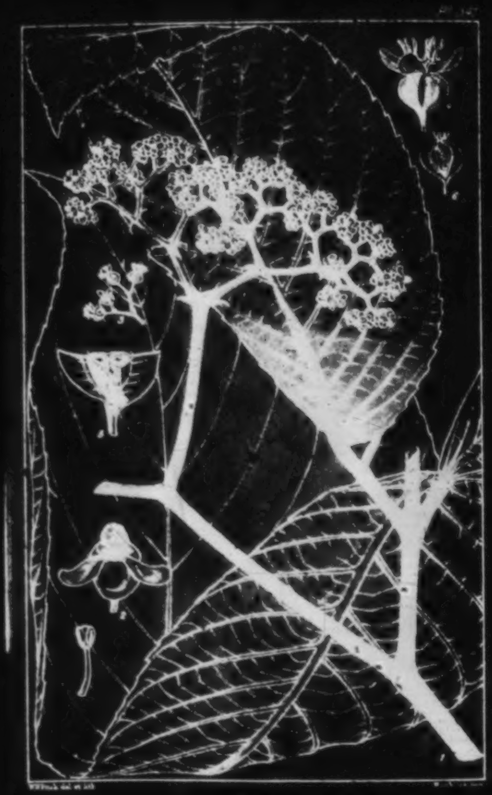
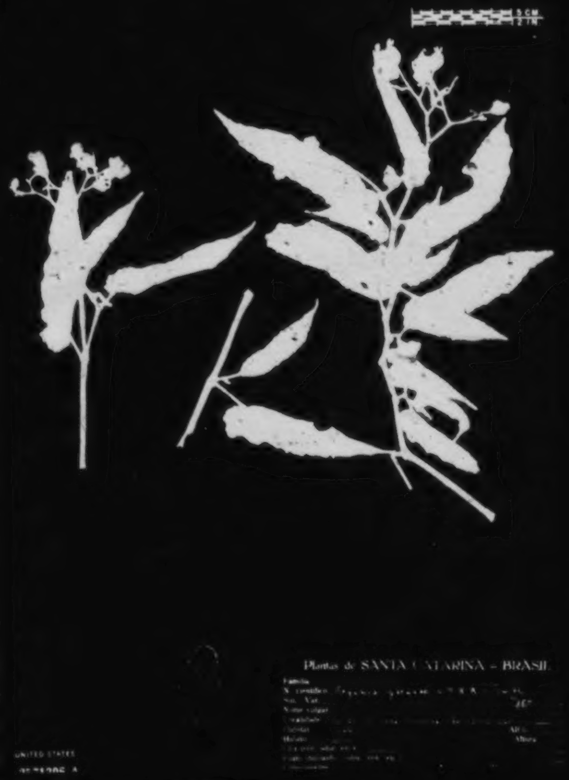
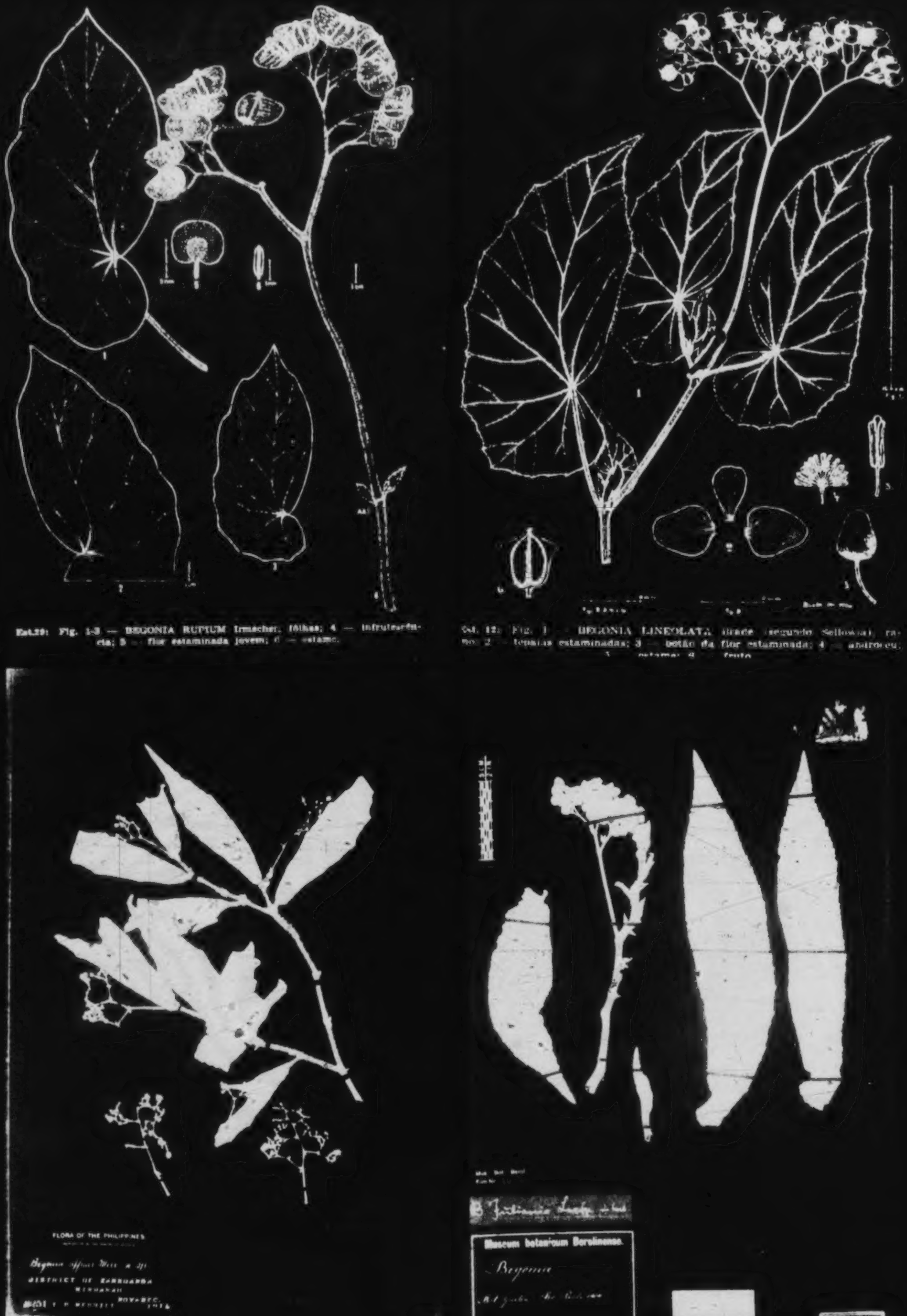
E




Plantas de SANTA CATARINA – BRASIL
UNITED STATES

19.11 (top), *B. peruibensis;* 19.10, *B. hookerana;* 19.12, *B. garuvae.*

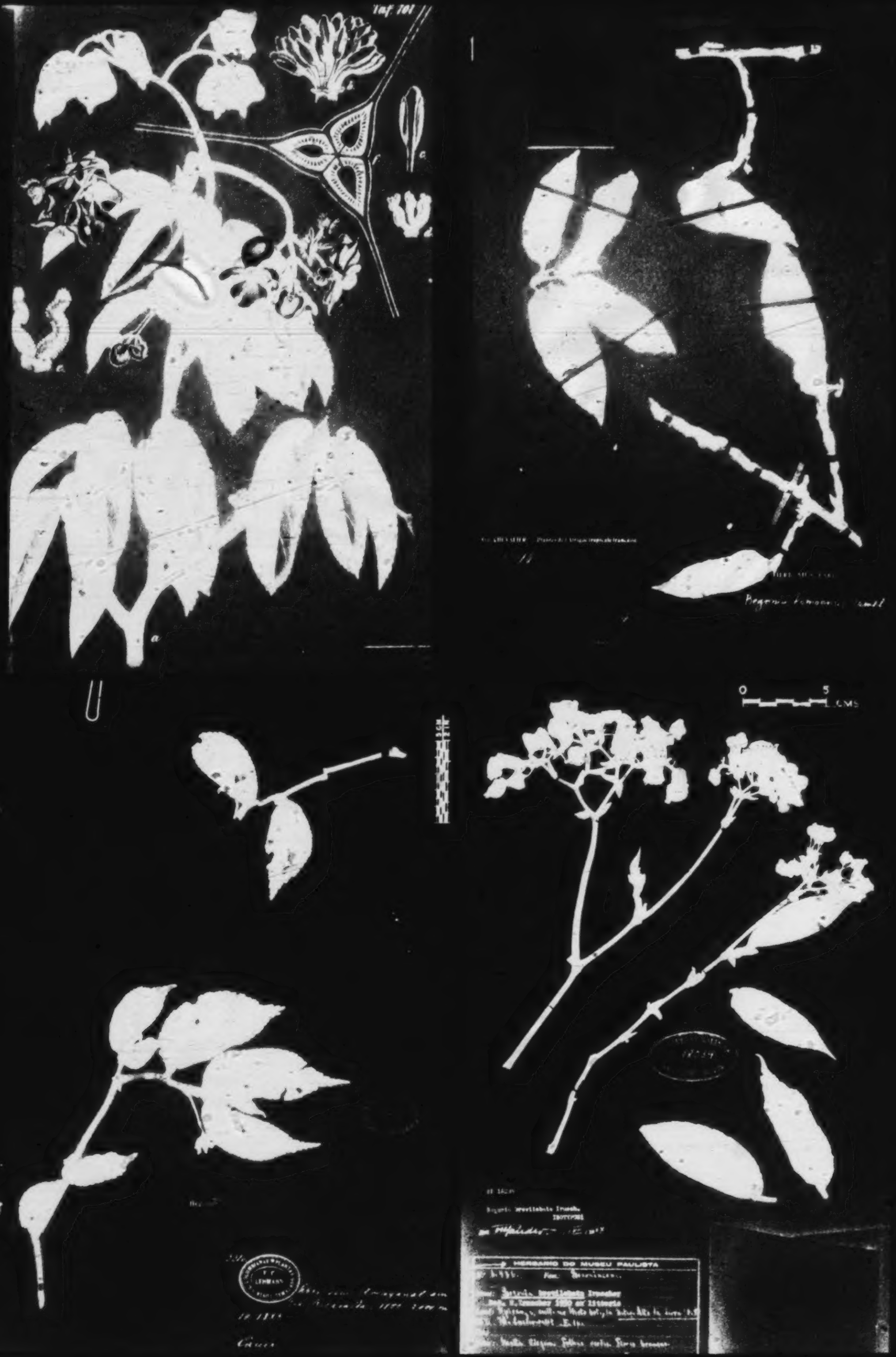


Est.20: Fig. 1-3 — BEGONIA RUPIUM Irmscher, fôlhas; 4 — infrutescência; 5 — flor estaminada jovem; 6 — estame.

Est. 12: Fig. 1 — BEGONIA LINEOLATA Brade (segundo Sellow), ramo; 2 — tépalas estaminadas; 3 — botão da flor estaminada; 4 — androceu; 5 — estame; 6 — fruto.

FLORA OF THE PHILIPPINES
Begonia affinis Merr. n. sp.
DISTRICT OF ZAMBOANGA
MINDANAO
Museum botanicum Berolinense.
Begonia
Mus. bot. Berol.

19.13, *B. rupium;* 19.14, *B. lineolata;* 19.15, *B. affinis;* 19.16, *B. juliana.*


Taf. 101
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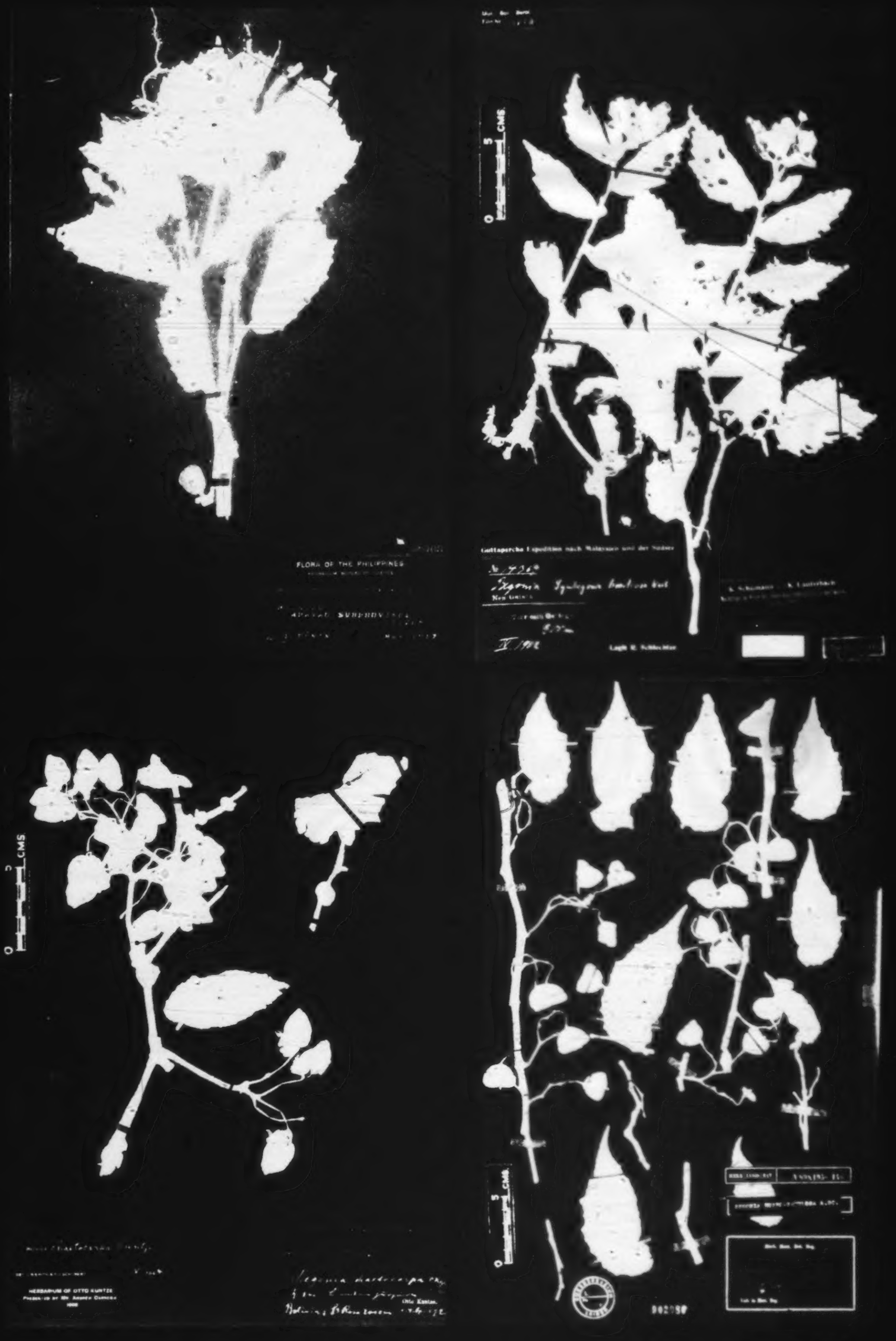
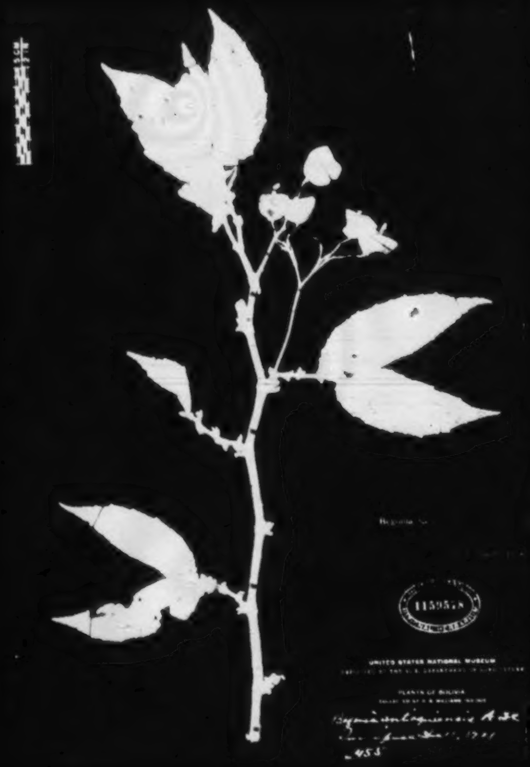
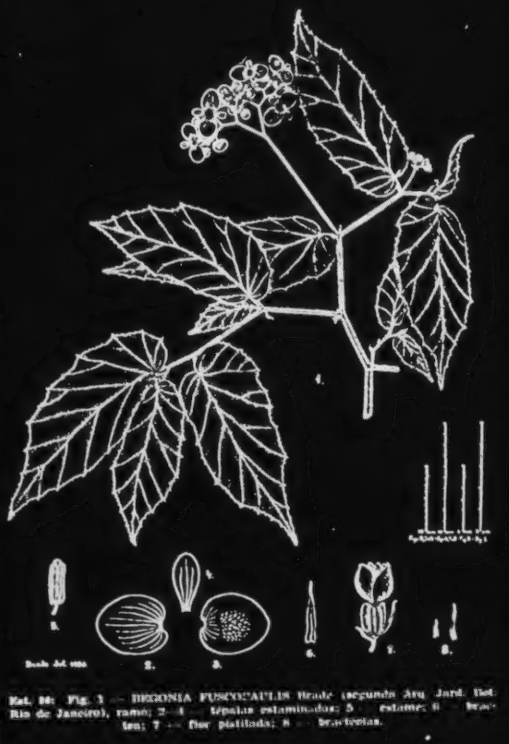
CMS

19.17, *B. echinosepala;* 19.18, *B. komoënsis;* 19.19, *B. lehmannii;* 19.20, *B. brevilobata.*


CMS
FLORA OF THE PHILIPPINES
Guttapercha Expedition nach Malayasien und der Südsee
CMS
HERBARIUM OF OTTO KUNTZE
CMS

19.21, *B. apayaoënsis;* 19.22, *Symbegonia bracteosa;* 19.23, *B. chaetocarpa;* 19.24, *B. rubro-setulosa.*


1159578
UNITED STATES NATIONAL MUSEUM
PLANTS OF BOLIVIA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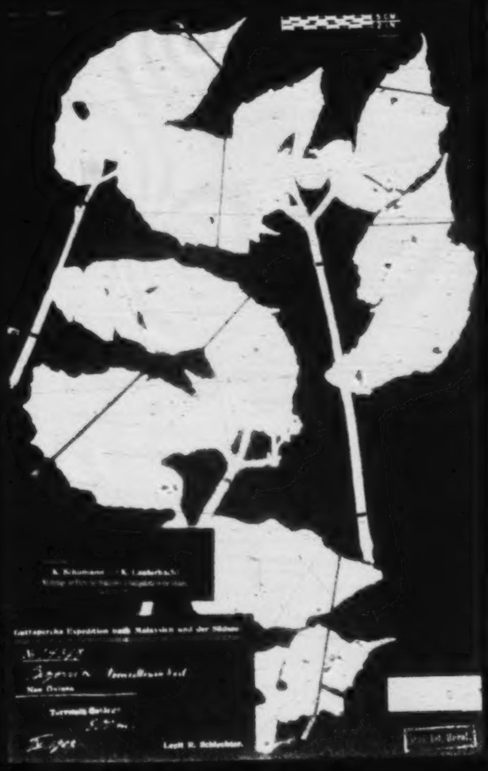
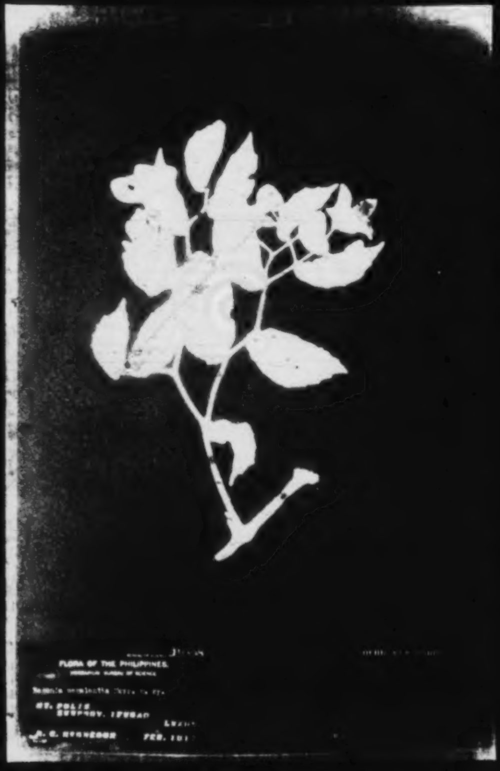
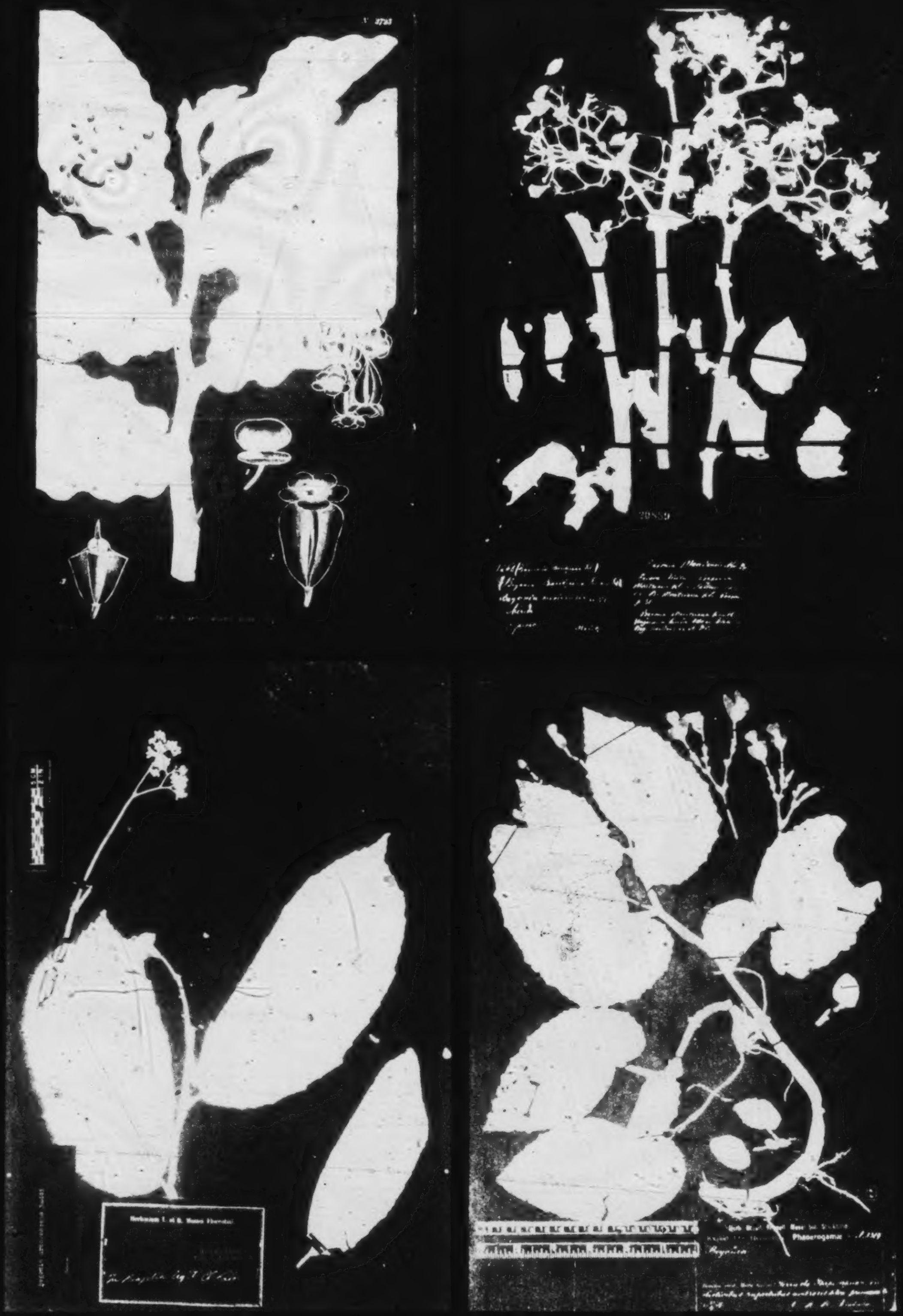
Est. 16: Fig. 1 — BEGONIA FUSCOCAULIS Brade (segundo Arq. Jard. Bot. Rio de Janeiro), ramo; 2-4 — tépalas estaminadas; 5 — estame; 6 — bractéa; 7 — flor pistilada; 8 — bractéolas.

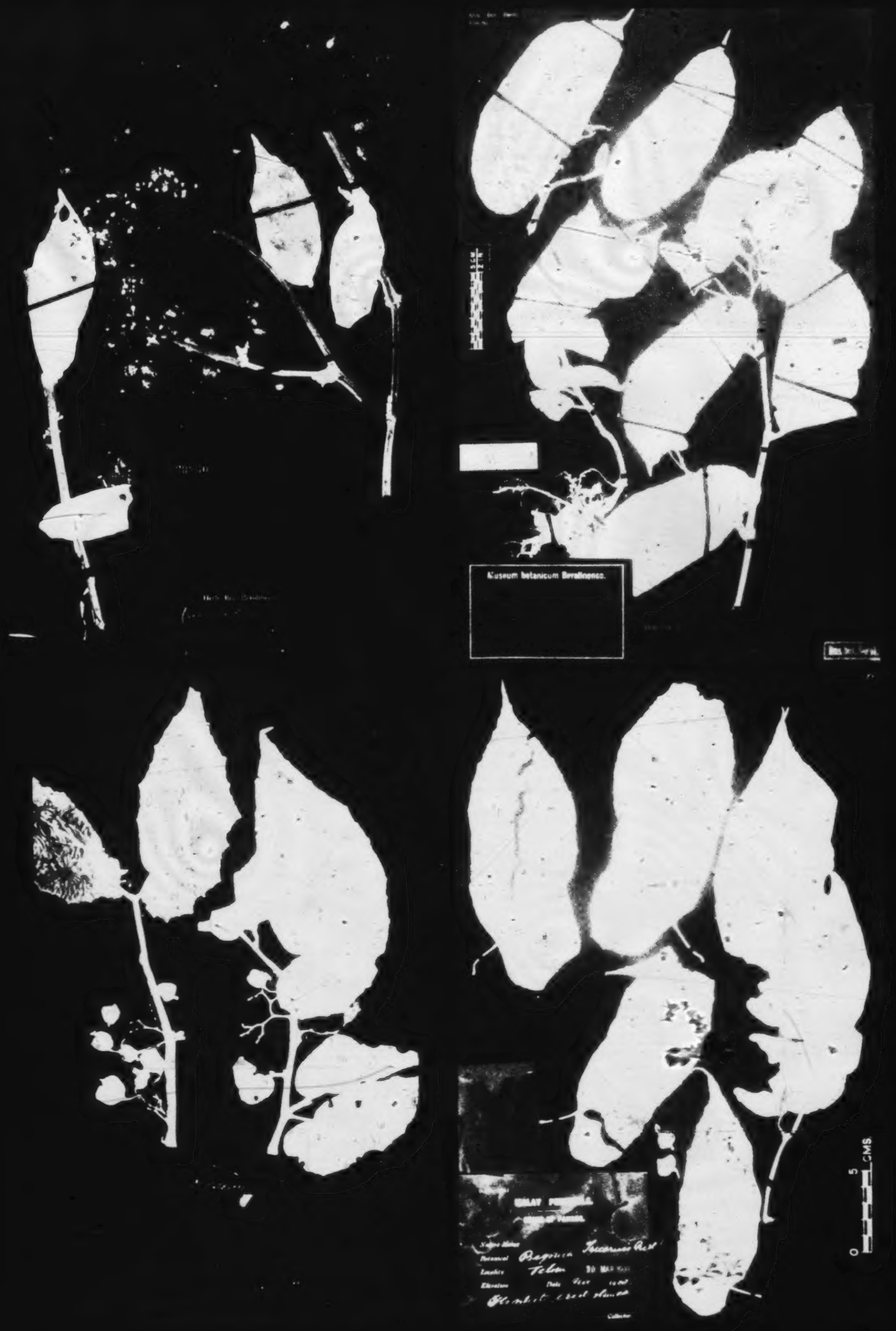

K. Schumann — K. Lauterbach
Guttapercha Expedition nach Malasien und der Südsee
Neu Guinea
Torricelli Gebirge
Legit R. Schlechter.


FLORA OF THE PHILIPPINES.
LUZON
FEB. 191

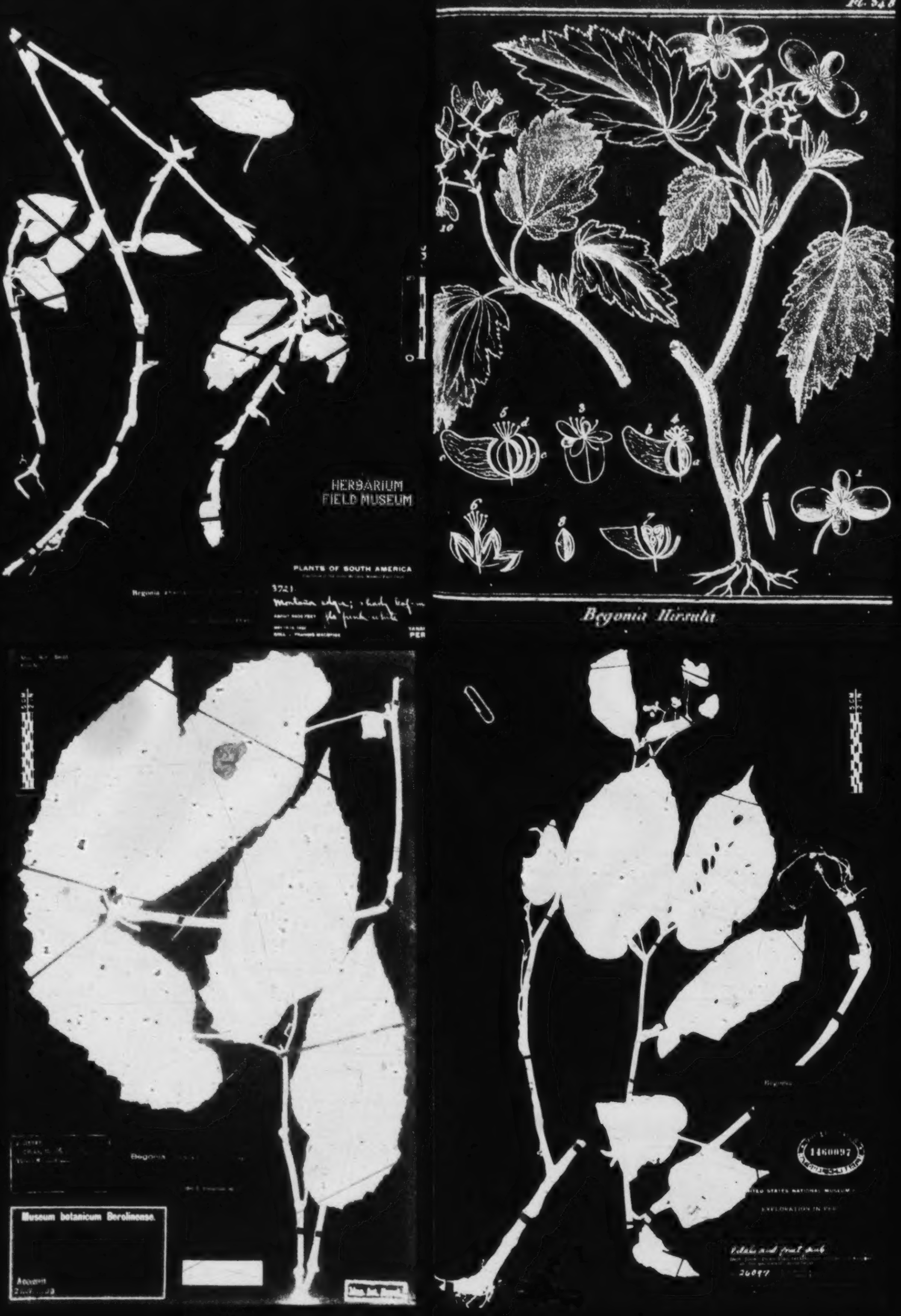
19.25, *B. leptostyla;* 19.26, *B. fuscocaulis;* 19.27, *B. torricellensis;* 19.28, *B. megalantha.*



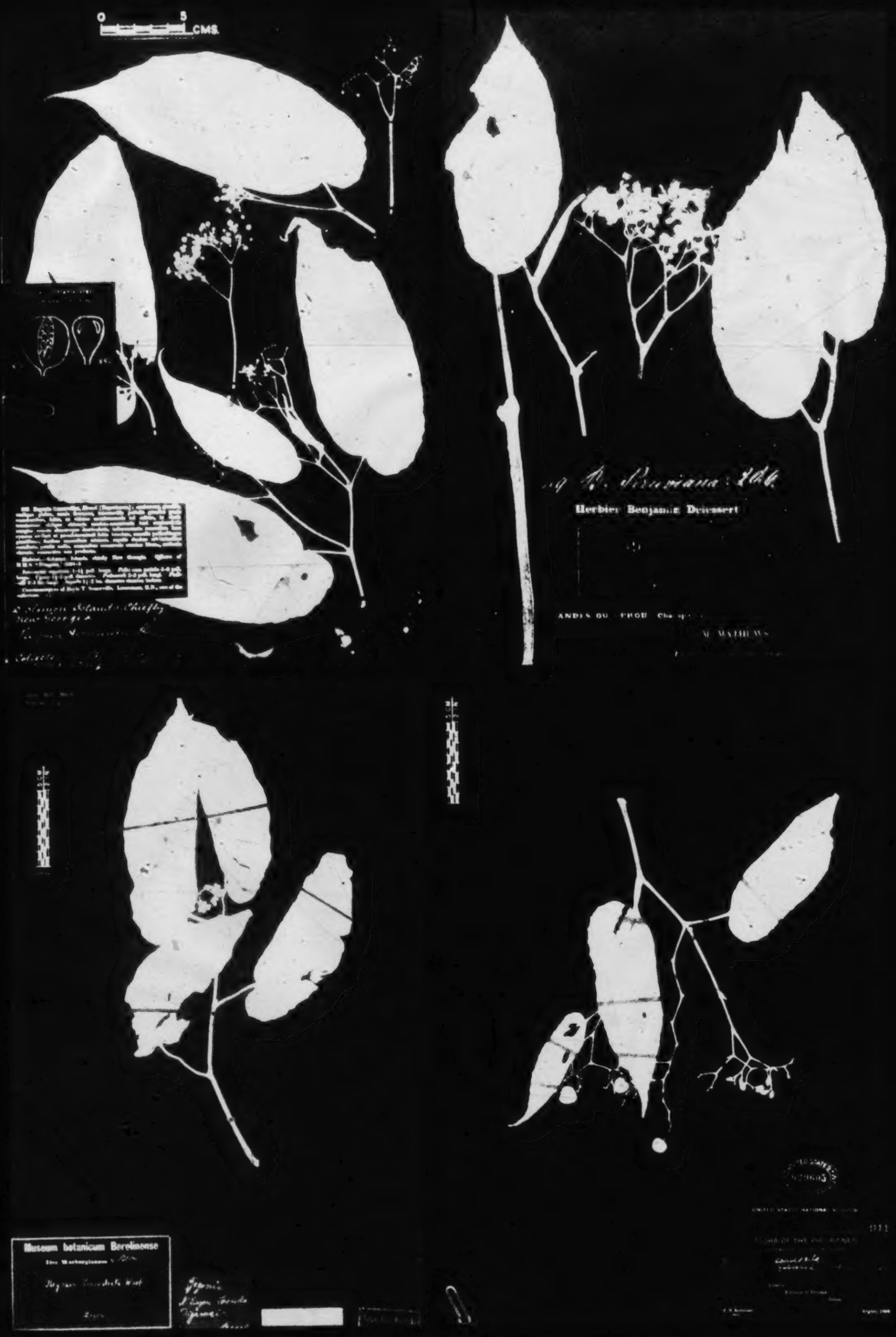
20.1, *B. undulata;* 20.2, *B. meridensis;* 20.3, *B. arborescens;* 20.4, *B. lindmanii.*


Museum botanicum Berolinense.
Native Name
Botanical
Begonia tricornis Ridl.
Locality
Telom
30 MAR
Elevation
Date
Collector
0
5
CMS

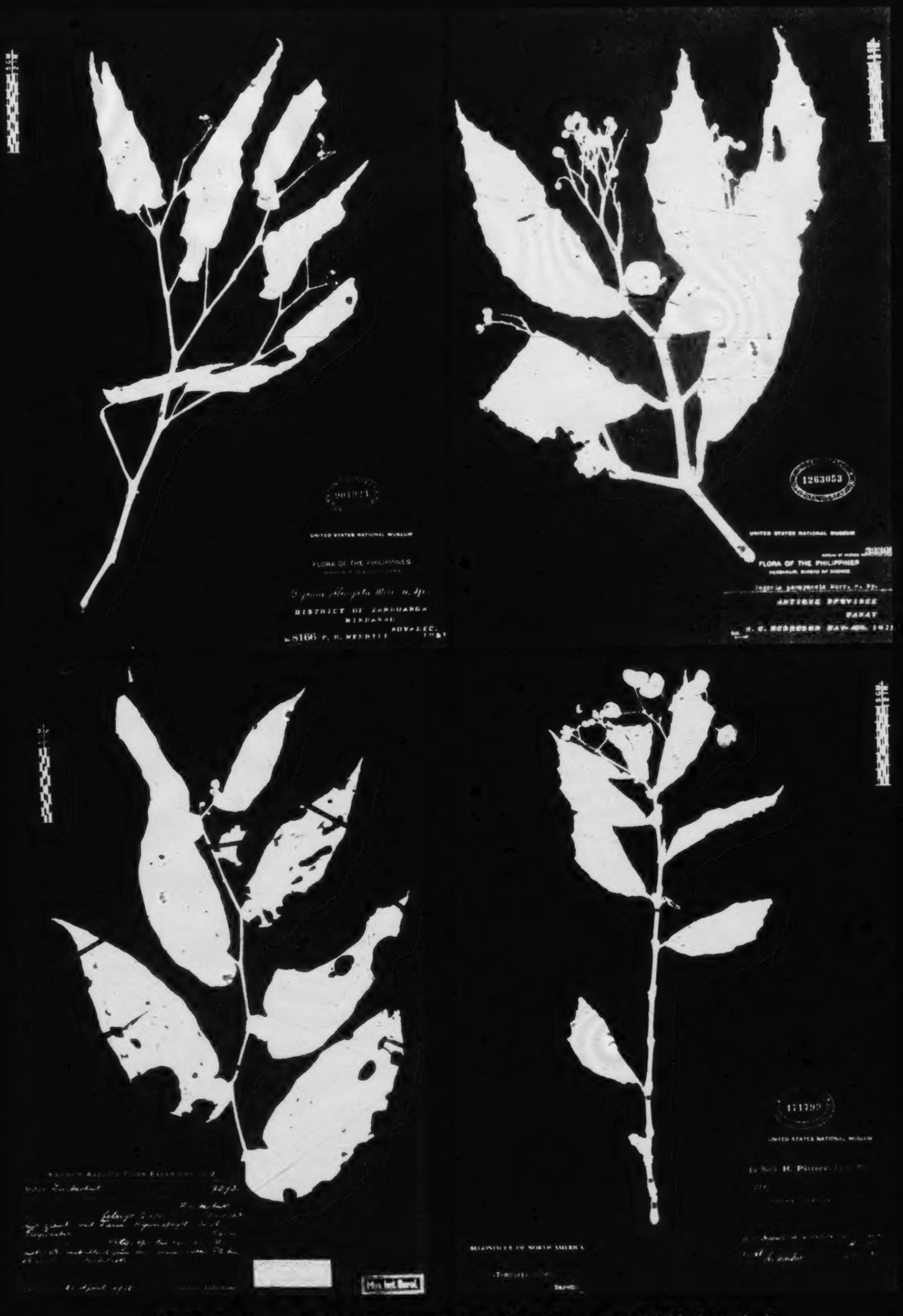
20.5, *B. polygonifolia*; 20.6, *B. consobrina*; 20.7, *B. fallax*; 20.8, *B. tricornis*.


HERBARIUM
FIELD MUSEUM
PLANTS OF SOUTH AMERICA
Begonia
Pl. 348
Begonia Hirsuta
Museum botanicum Berolinense.
Begonia
1460097
UNITED STATES NATIONAL MUSEUM
EXPLORATION IN PERU

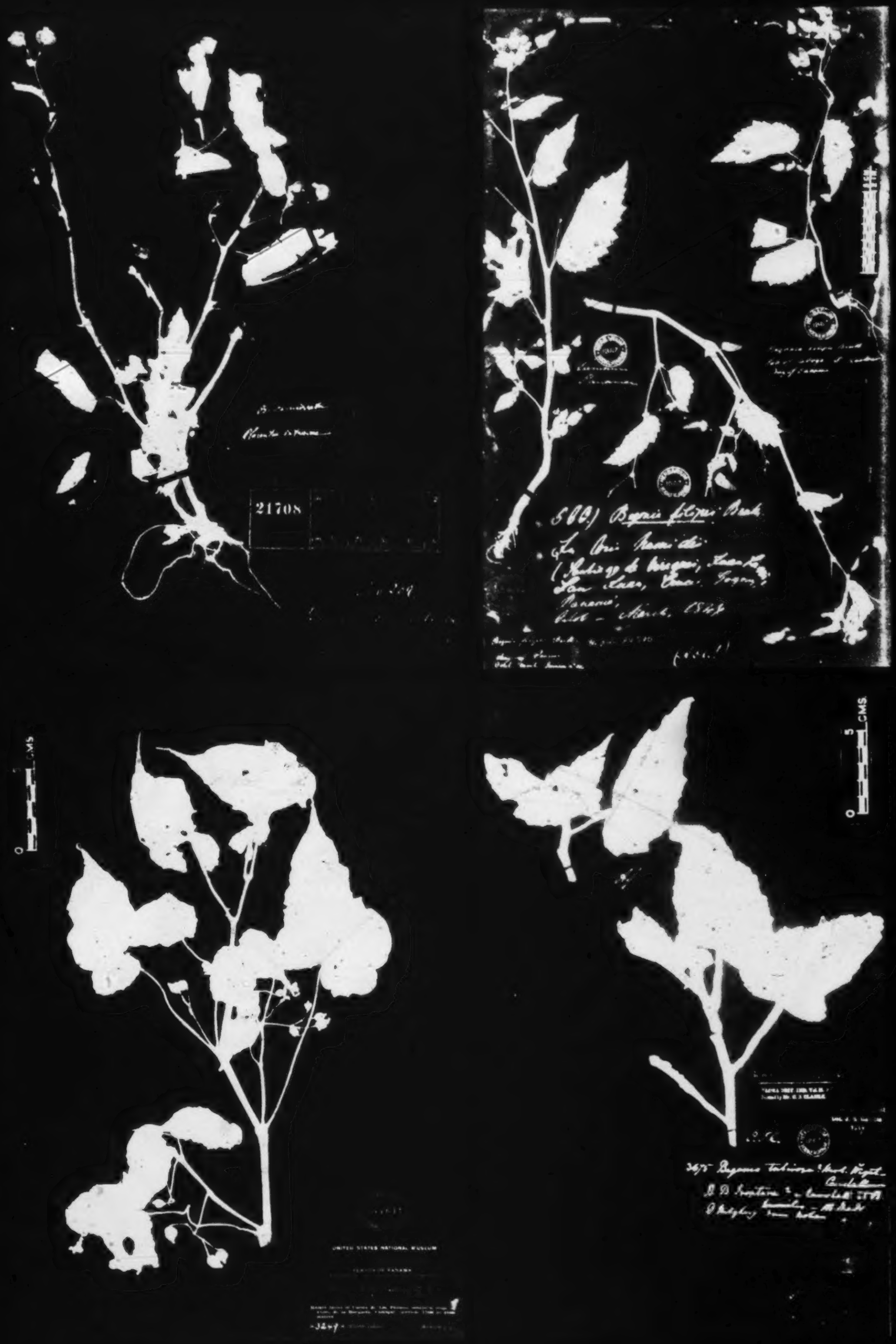
20.9, *B. obtecticaulis;* 20.10, *B. hirsuta;* 20.11, *B. tetragona;* 20.12, *B. juninensis.*


0
5
CMS.
B. Peruviana
Herbier Benjamin Delessert
ANDES DU PEROU
M. MATHEWS
Museum botanicum Berolinense

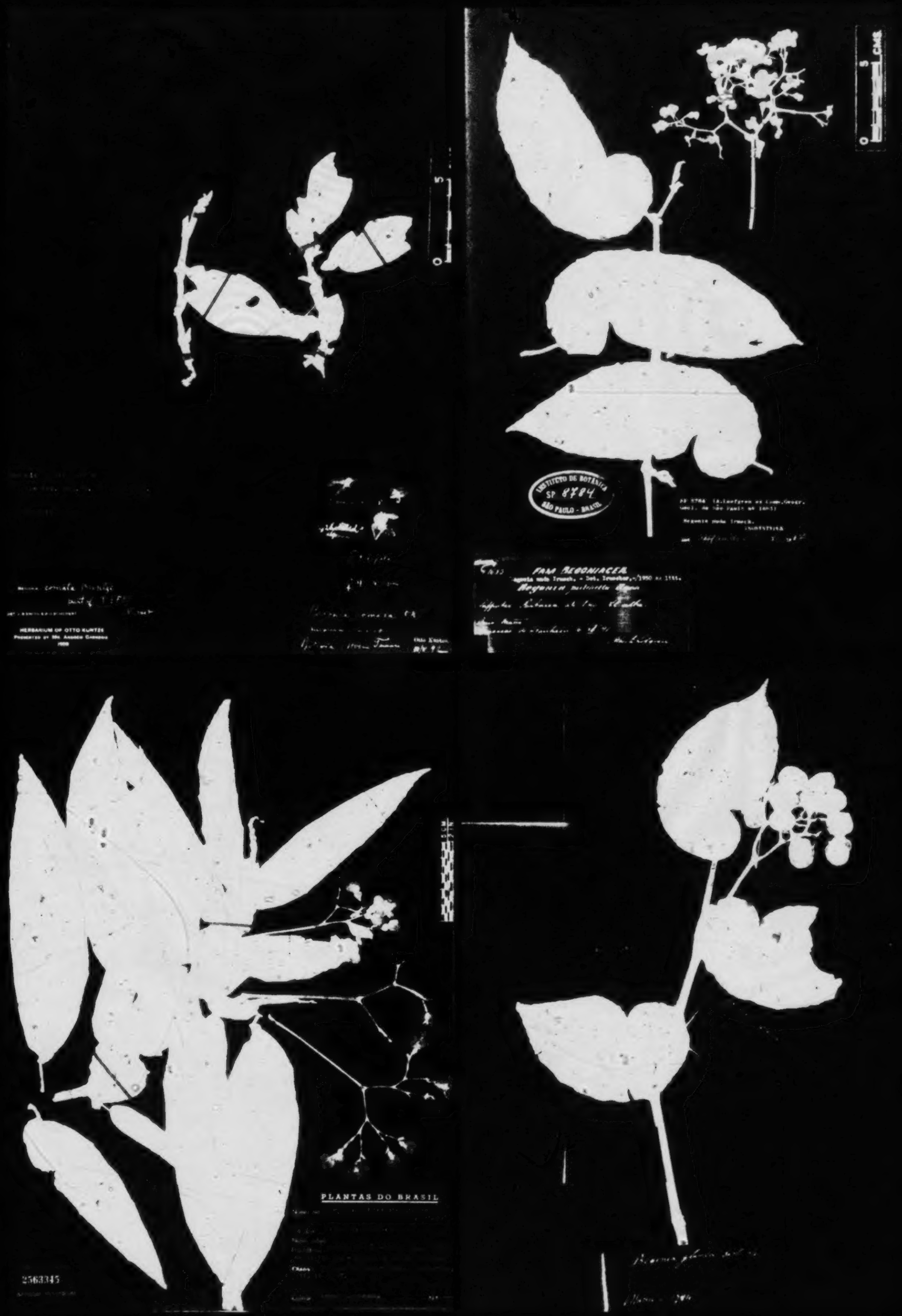
20.13, *B. somervillei;* 20.14, *B. peruviana;* 20.15, *B. leucosticta;* 20.16, *B. esculenta.*


UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
DISTRICT OF ZAMBOANGA
MINDANAO
8166
1263053
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
ANTIQUE PROVINCE
PANAY
UNITED STATES NATIONAL MUSEUM
H. Pittier
BEGONIACEAE OF NORTH AMERICA
Mus. bot. Berol.

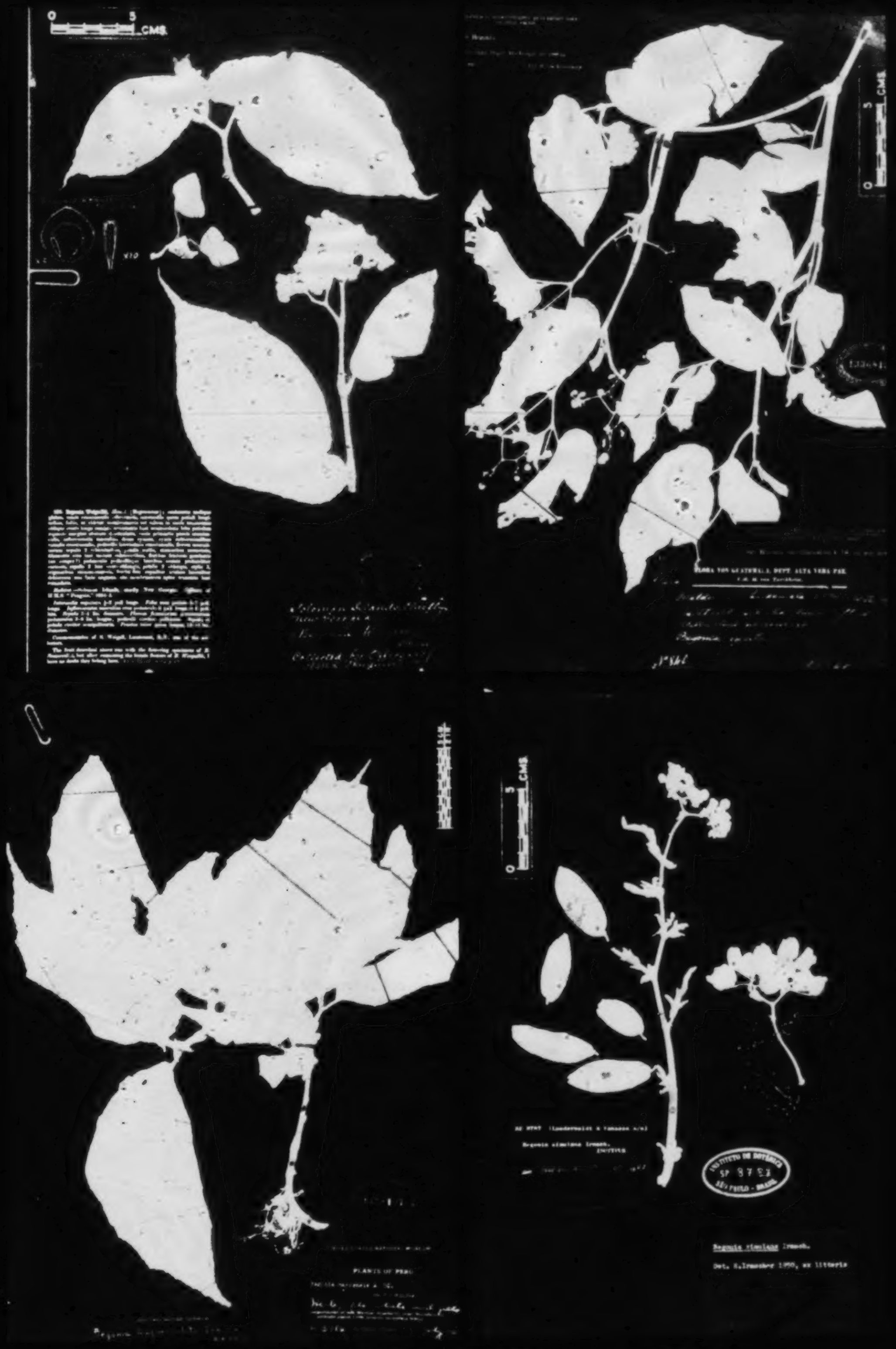
20.17, *B. oblongata;* 20.18, *B. panayensis;* 20.19, *B. ledermannii;* 20.20, *B. tonduzii.*


21708
580) Begonia filipes Benth.
0 5 CMS
UNITED STATES NATIONAL MUSEUM
0 5 CMS

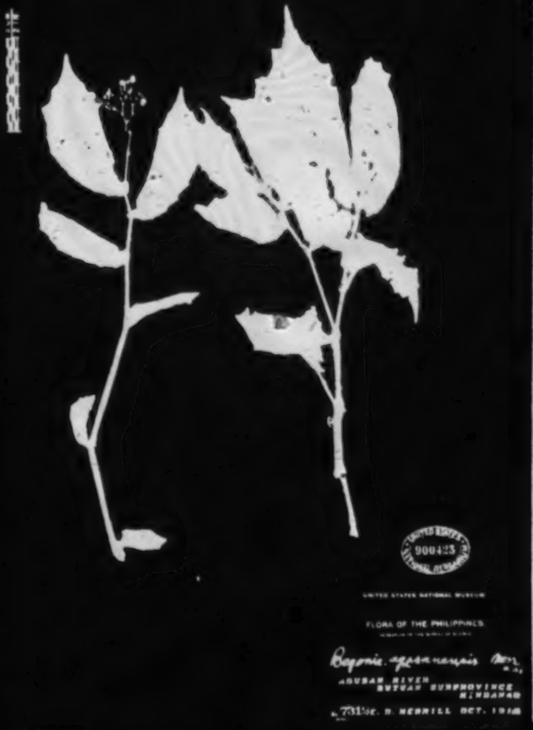
20.21, *B. semiovata;* 20.22, *B. filipes;* 20.23, *B. carpinifolia;* 20.24, *B. malabarica.*

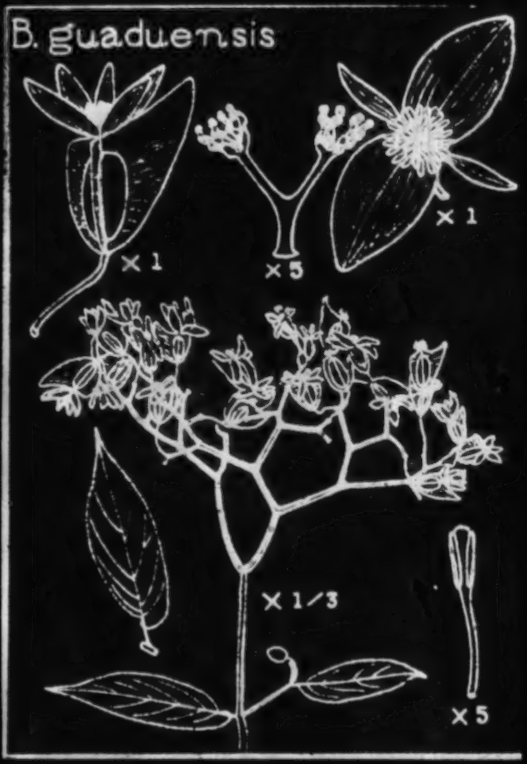

HERBARIUM OF OTTO KUNTZE
INSTITUTO DE BOTÂNICA
SP 8784
SÃO PAULO - BRASIL
FAM BEGONIACEA
PLANTAS DO BRASIL
2563345

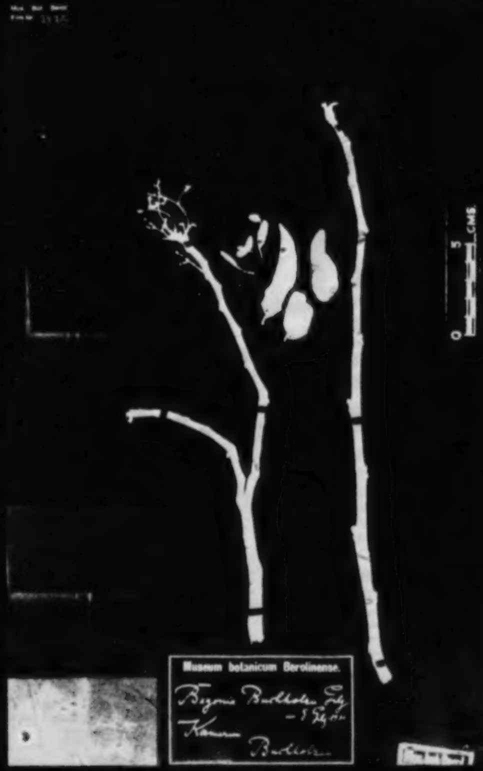
20.25, *B. comata;* 20.26, *B.nuda;* 20.27, *B. odeteiantha;* 20.28, *B. glauca.*

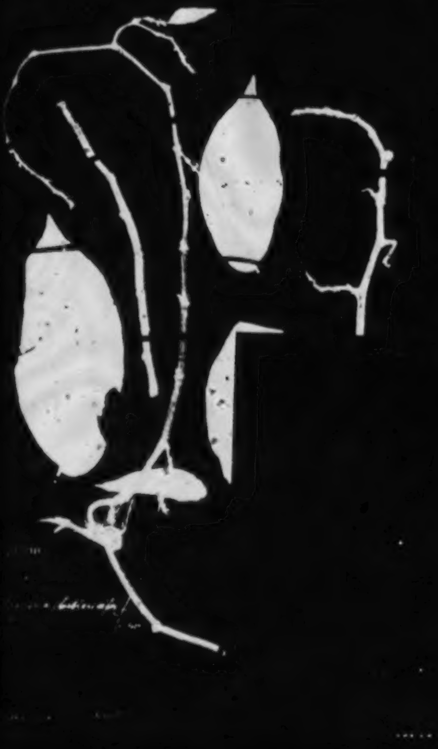


20.29, *B. weigallii;* 20.30, *B. convallariodora;* 20.31, *B. longimaculata;* 20.32, *B. larorum.*

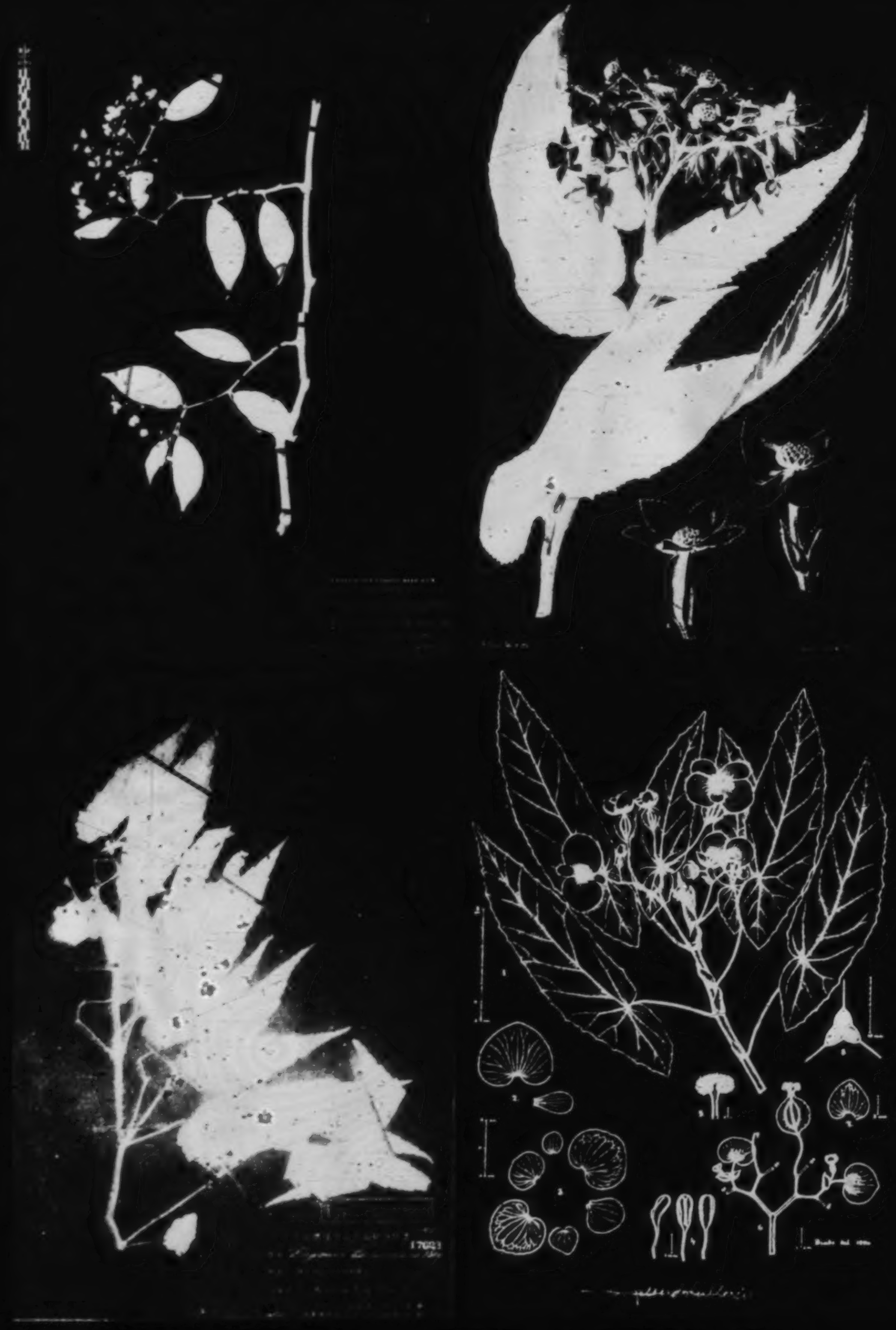

900423
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
Begonia agusanensis Merr.
AGUSAN RIVER
BUTUAN SUBPROVINCE
MINDANAO
7315 E. D. MERRILL OCT. 1918


B. guaduensis
× 1
× 5
× 1
× 1/3
× 5

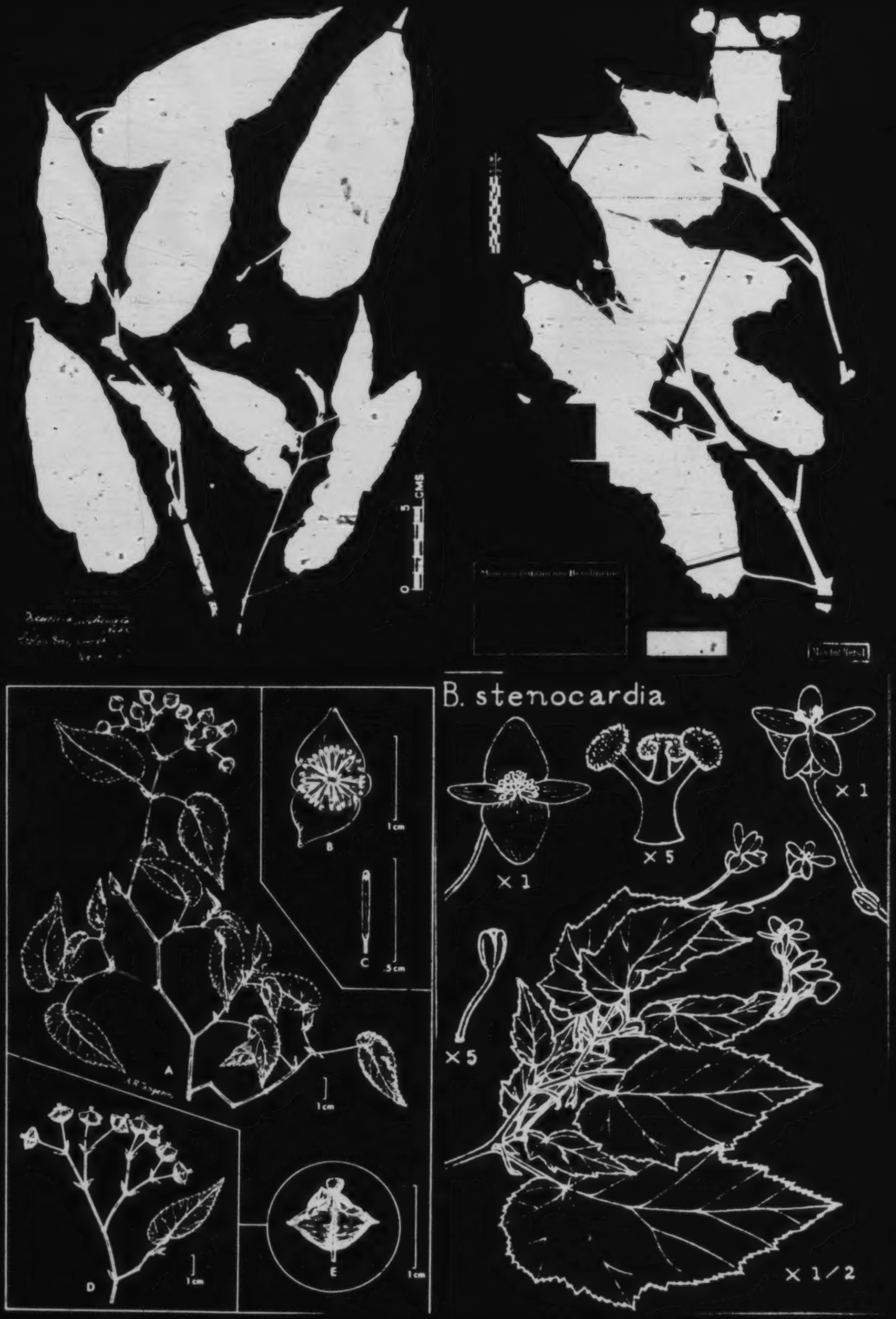

0
5
CMS
Museum botanicum Berolinense.
Begonia Buchholzii Gilg
Kamerun
Buchholz



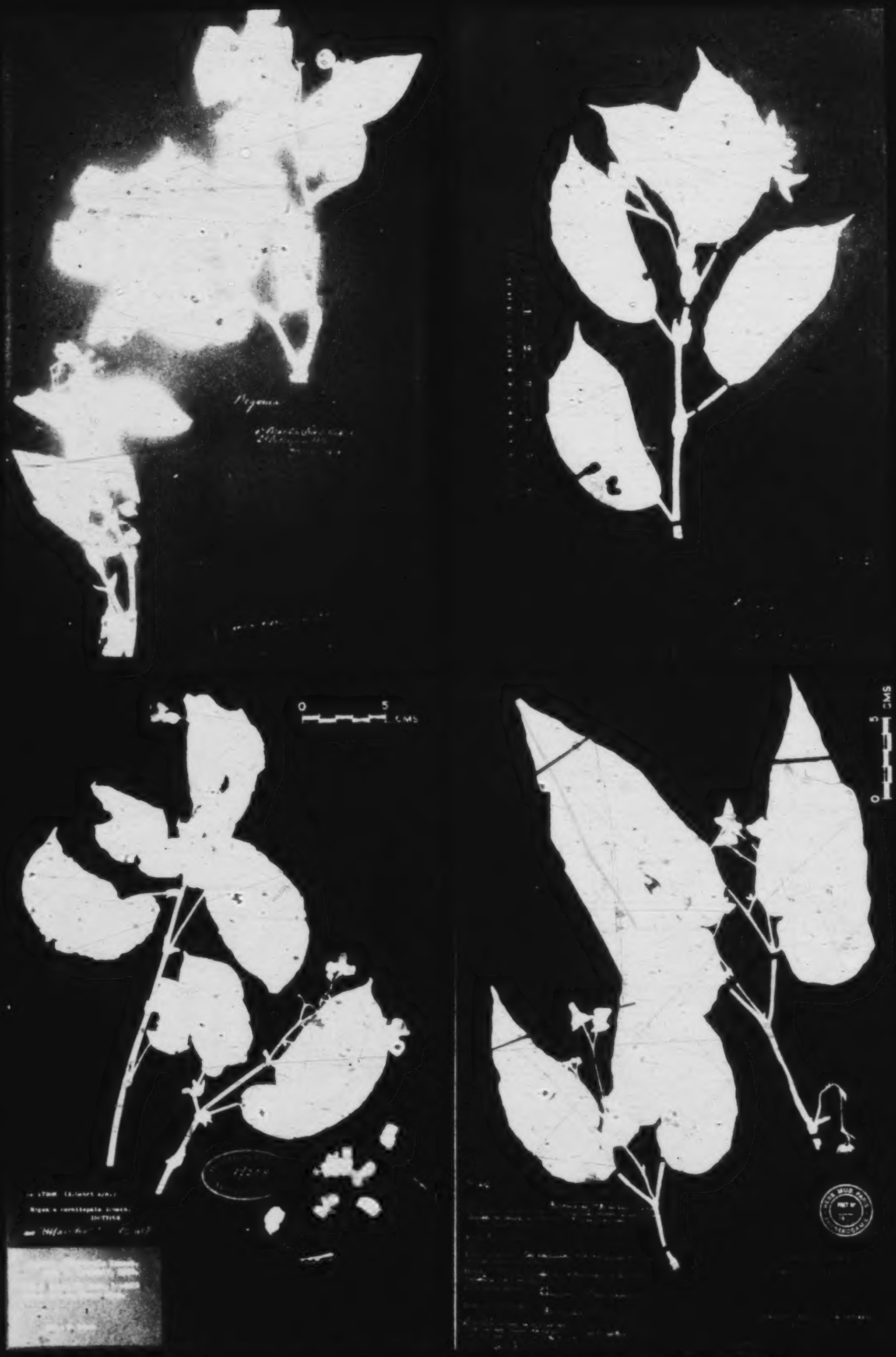
20.33, *B. agusanensis;* 20.34, *B. guaduensis;* 20.35, *B. buchholzii;* 20.36, *B. besleriifolia.*



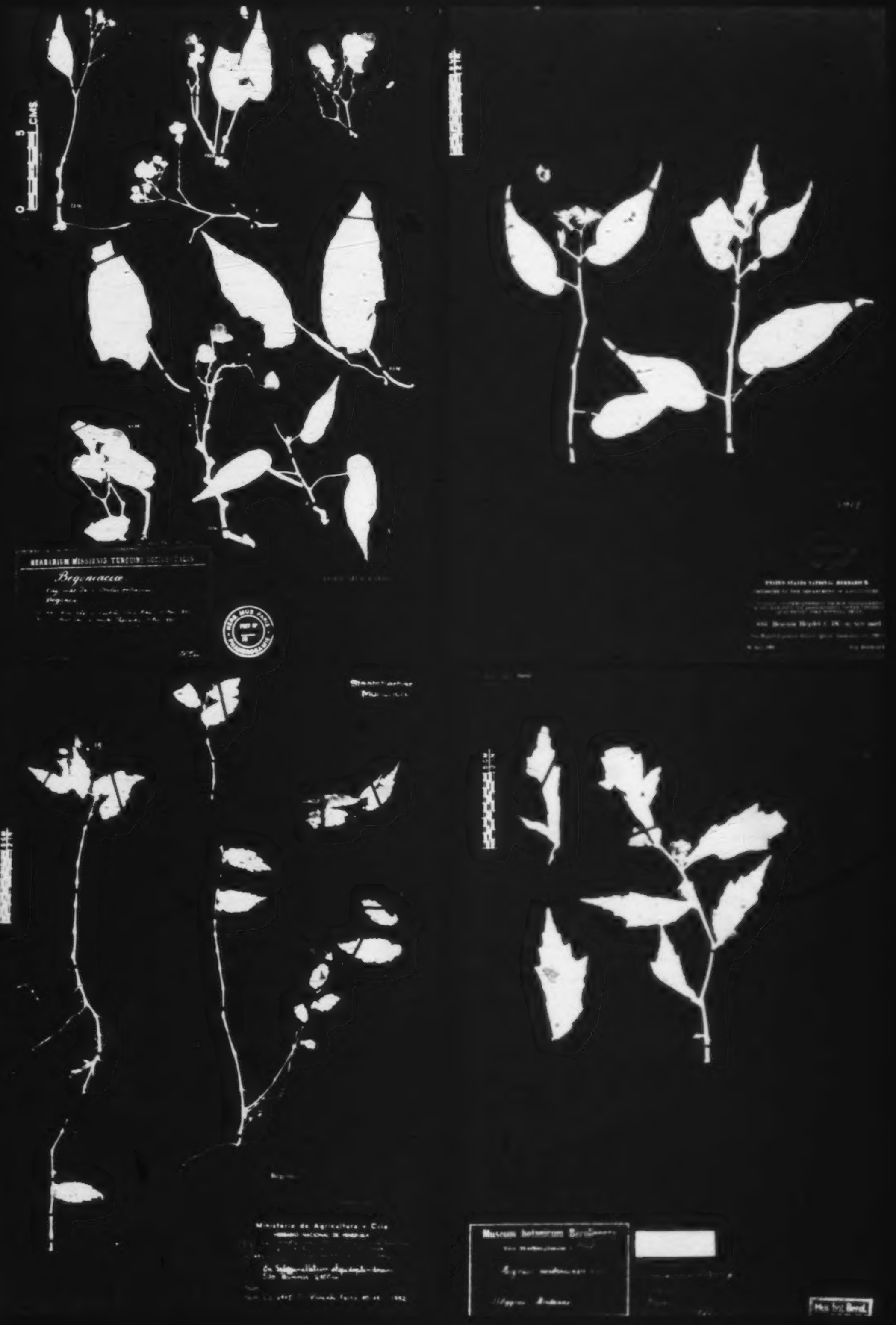
20.37, *B. estrellensis;* 20.38, *B. microptera;* 20.39, *B. taiwaniana;* 20.40, *B. pseudolubbersii.*


0
5
CMS
B. stenocardia
×1
×5
×1
×5
×1/2
A
B
C
D
E
1cm
1cm
.5cm
1cm
1cm

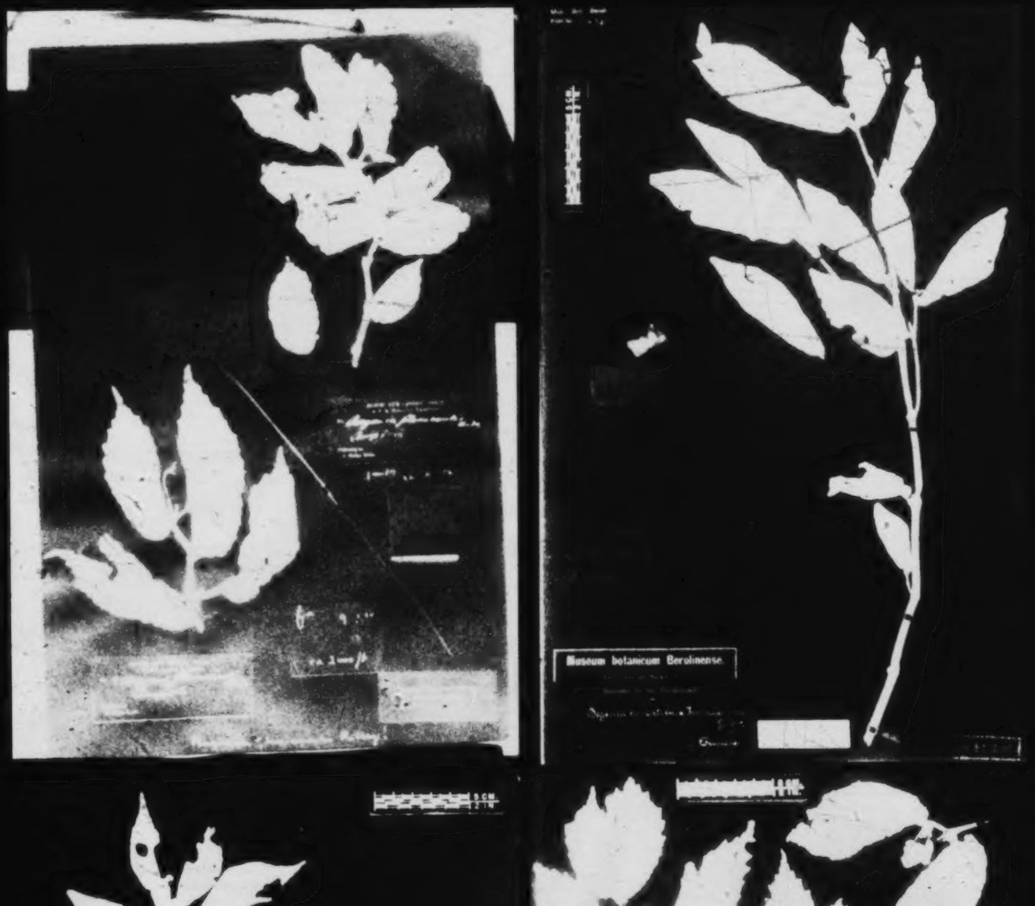
20.41, *B. turbinata;* 20.42, *B. pickelii;* 20.43, *B. trapa;* 20.44, *B. stenocardia.*


0
5
CMS
0
5
CMS

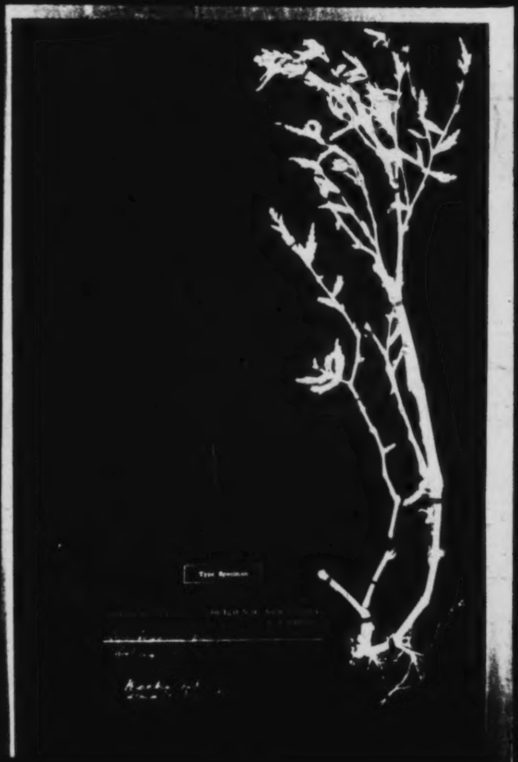
20.45, *B. bahiensis;* 20.46, *B. itupavenis;* 20.47, *B. cornitepala;* 20.48, *B. geoffrayi.*


Begoniaceae
Staatsherbar München
Ministerio de Agricultura y Cria
Museum botanicum Berolinense
Mus. bot. Berol.

20.49, *B. boisiana;* 20.50, *B. heydei;* 21.1, *B. vareschii;* 21.2, *B. mindanaënsis.*


Museum botanicum Berolinense
N°564
Begonia

21.3, *B. flexicaulis*; 21.4, *B. cuneatifolia*; 21.5, *B. sessilifolia*; 21.6, *B. fruticella*.


Type Specimen

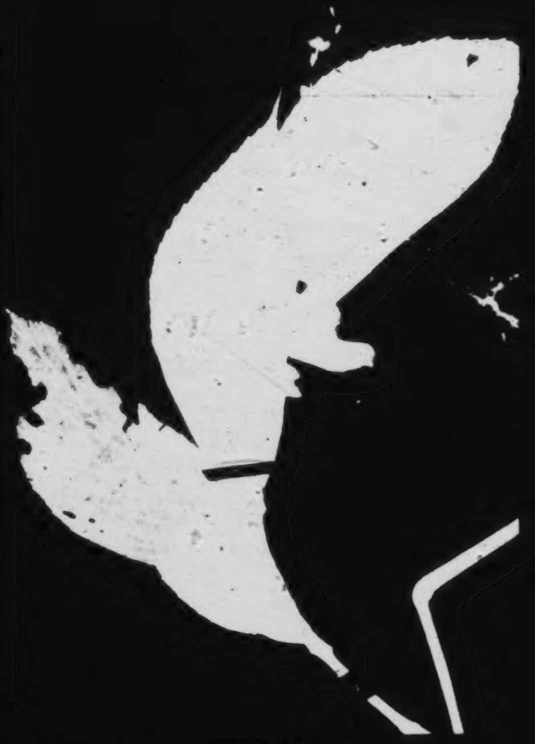
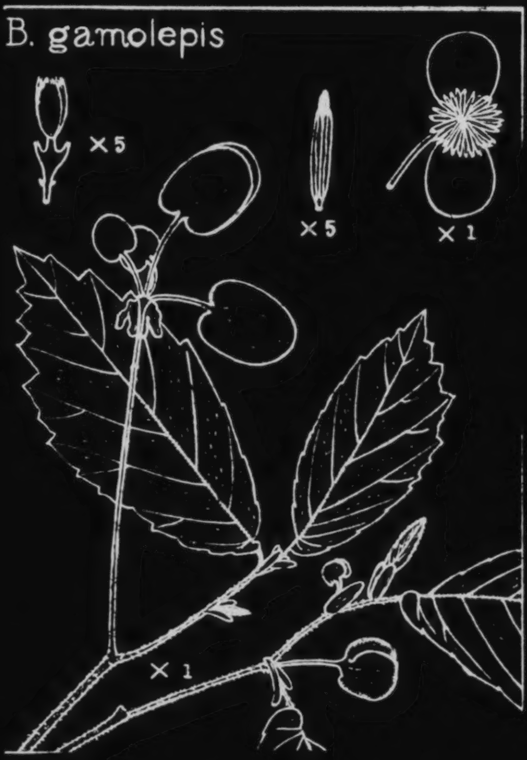
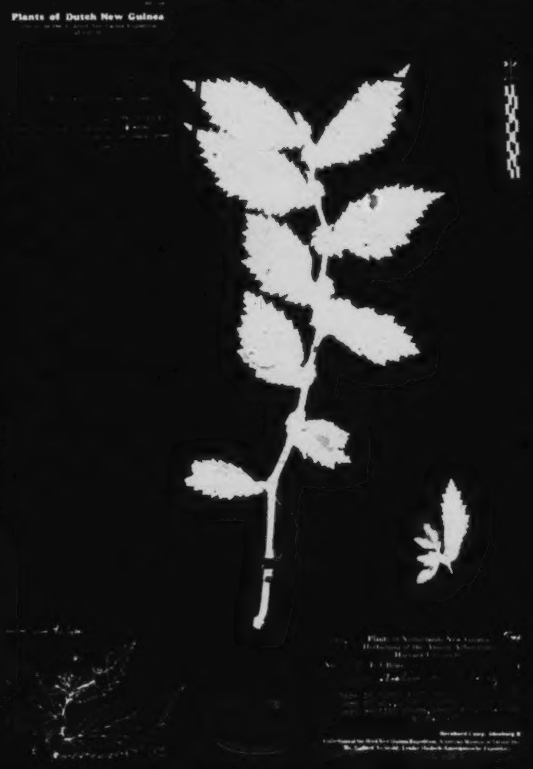


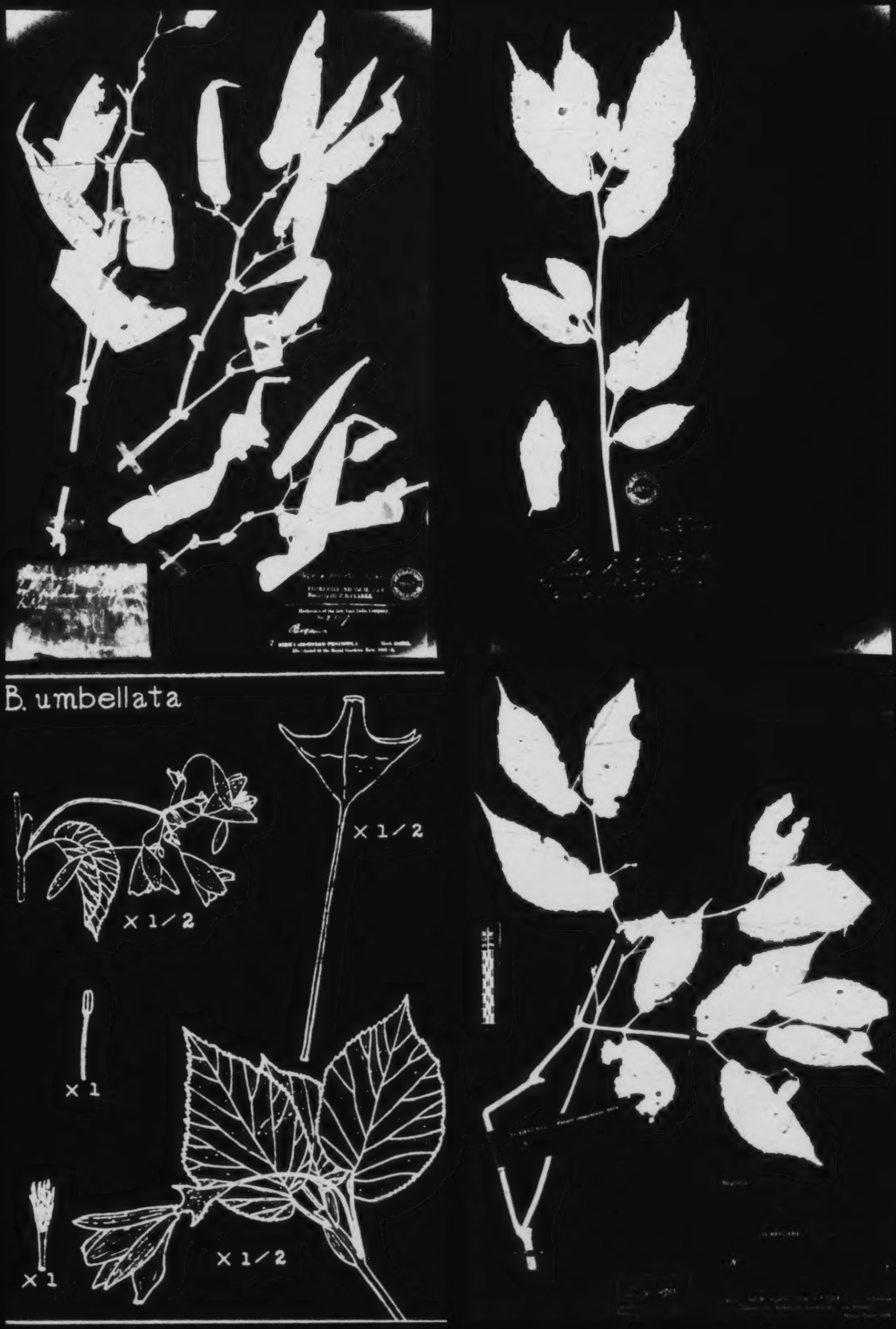
Fig. 3 - *Begonia artior* Irmsch. (*Beccari P. B. n. 1012* - Herb. Beccari n. 4496


B. gamolepis
×5
×5
×1
×1

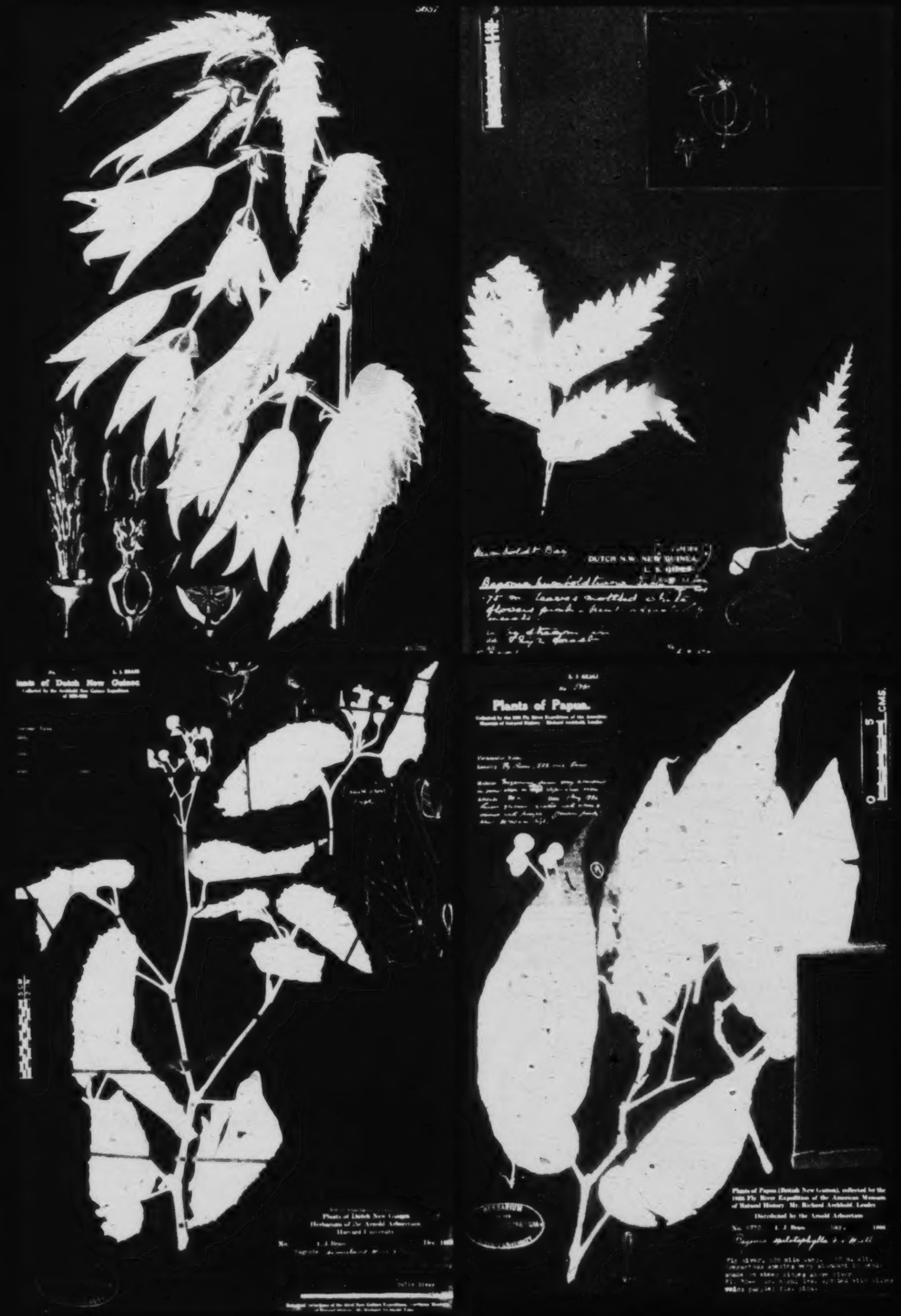

Plants of Dutch New Guinea

21.7, *Symbegonia parvifolia;* 21.8, *B. artior;* 21.9, *B. gamolepis;* 21.10, *B. otophora.*

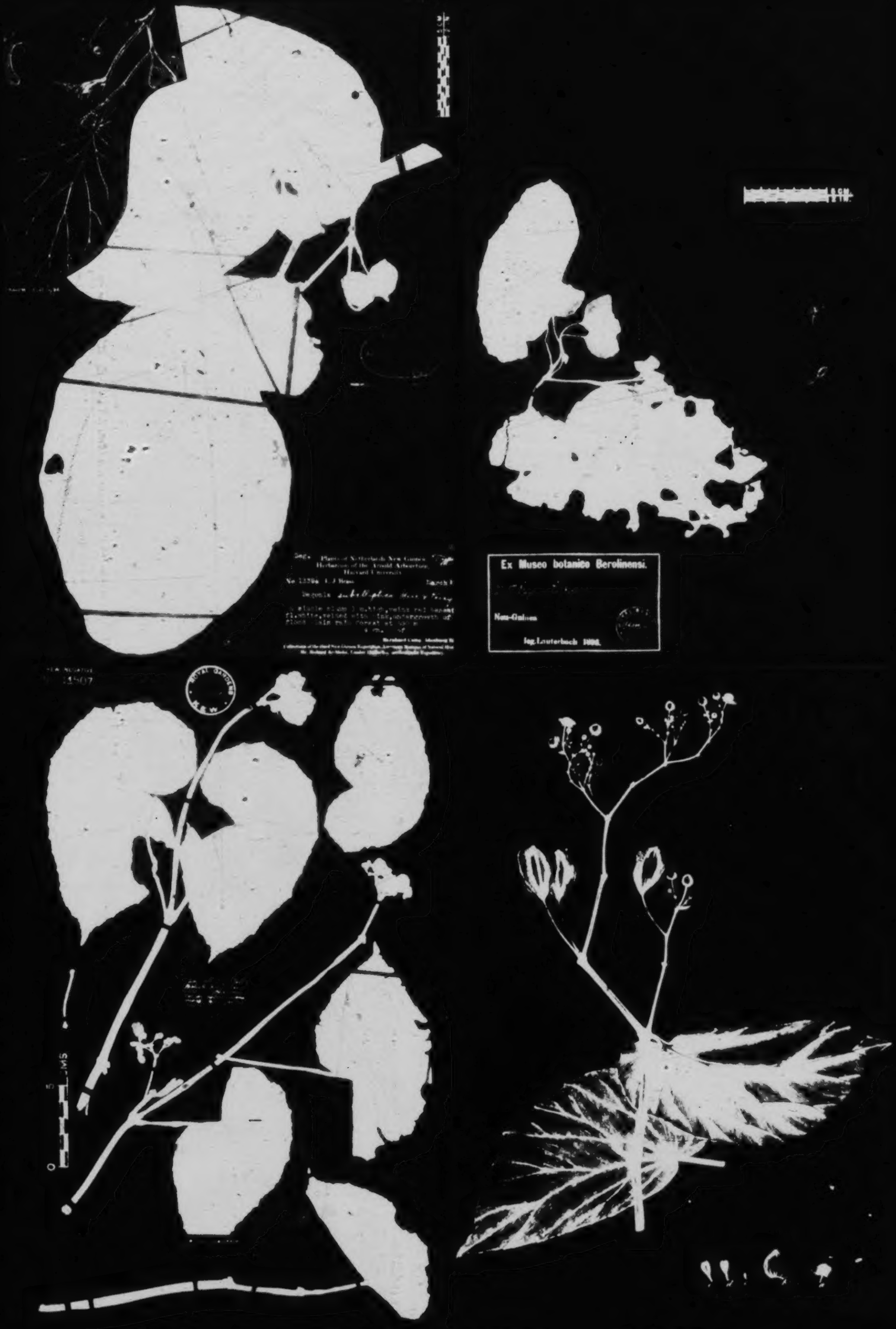
BEST COPY AVAILABLE


B. umbellata
× 1/2
× 1/2
× 1
× 1
× 1/2

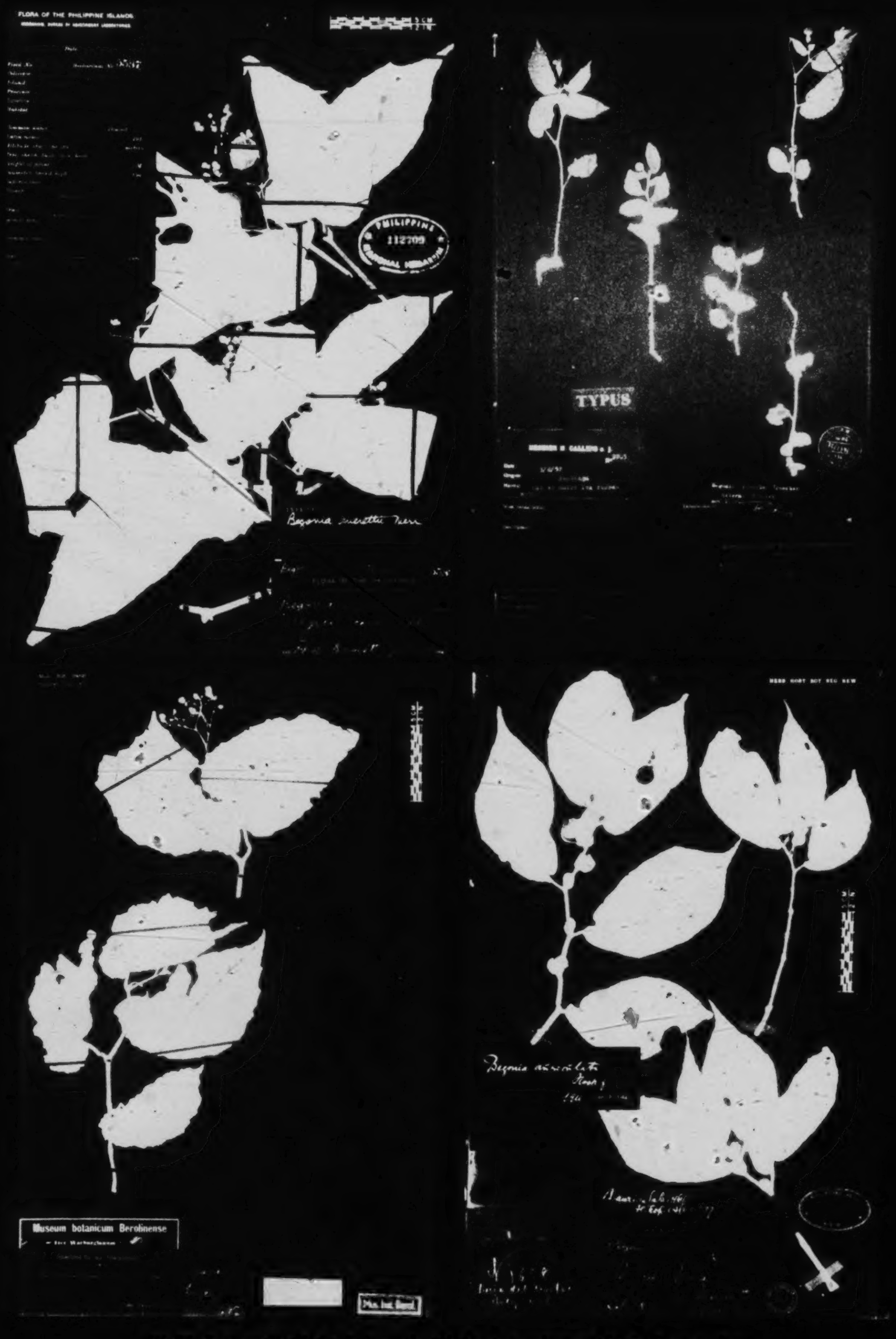
21.11, *B. goniotis;* 21.12, *B. longirostris;* 21.13, *B. umbellata;* 21.14, *B. divaricata.*


Humboldt Bay
DUTCH N.W. NEW GUINEA
Plants of Dutch New Guinea
Plants of Papua.
Plants of Papua (British New Guinea), collected by the 1936 Fly River Expedition of the American Museum of Natural History. Mr. Richard Archbold, Leader
Distributed by the Arnold Arboretum
CMS.
5
0

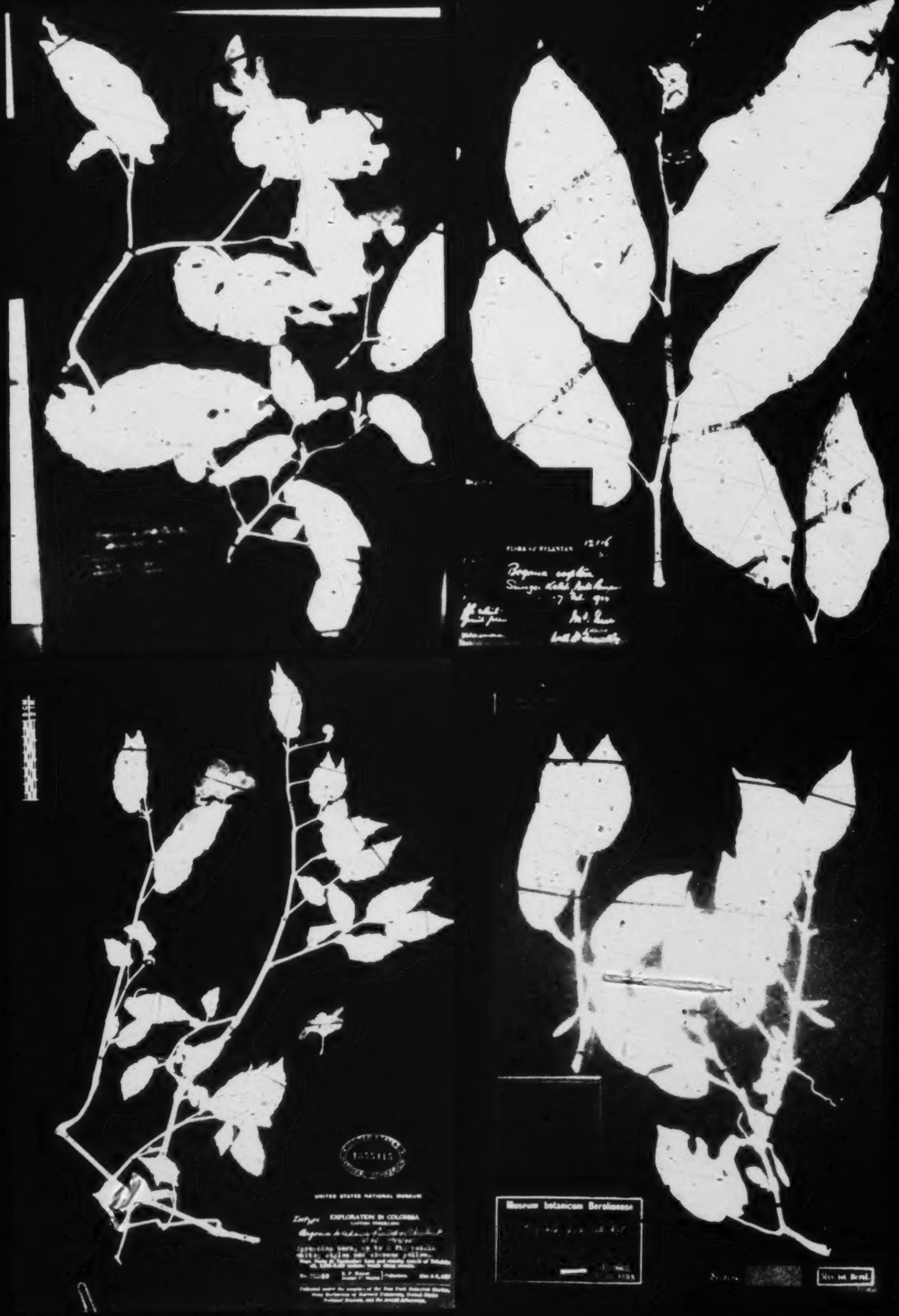
21.15, *B. boliviensis;* 21.16, *B. humboldtiana;* 21.17, *B. simulans;* 21.18, *B. spilotophylla.*


Plants of Netherlands New Guinea
Herbarium of the Arnold Arboretum,
Harvard University
Begonia
Ex Museo botanico Berolinensi.
Neu-Guinea
leg. Lauterbach 1896.
ROYAL GARDENS KEW
0
5
CMS

21.19, *B. subelliptica;* 21.20, *B. lauterbachii;* 2.21, *B. bracteosa;* 21.22, *B. isoptera.*


FLORA OF THE PHILIPPINE ISLANDS
PHILIPPINE
112709
NATIONAL HERBARIUM
Begonia everettii Merr.
TYPUS
HERB HORT BOT REG KEW
Begonia auriculata Hook f.
Museum botanicum Berolinense
Mus. bot. Berol.

21.23, *B. everettii;* 21.24, *B. iucunda;* 21.25, *B. insularum;* 21.26. *B. auriculata.*


FLORA OF PALAWAN
UNITED STATES NATIONAL MUSEUM
EXPLORATION IN COLOMBIA
Museum botanicum Berolinense

21.27, *B. vanderwateri;* 21.28, *B. pseudisoptera;* 21.29, *B. toledana;* 21.30, *B. fusialata.*

Sunyatsenia Vol. 4, No. 1-2 Chun & F. Chun: Begonia

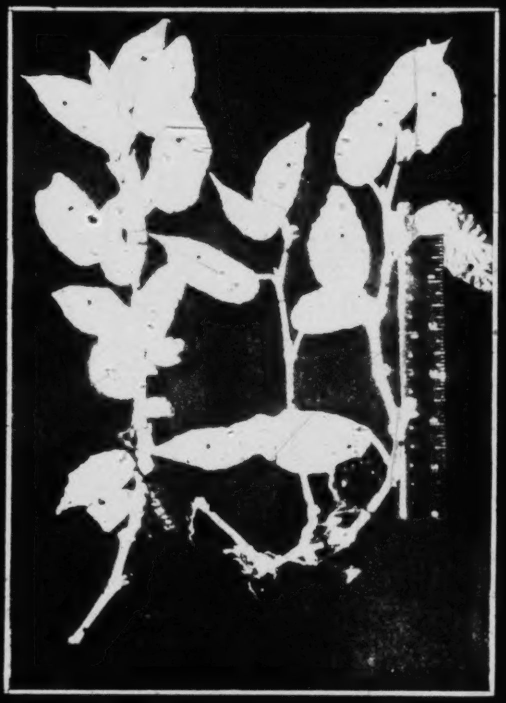
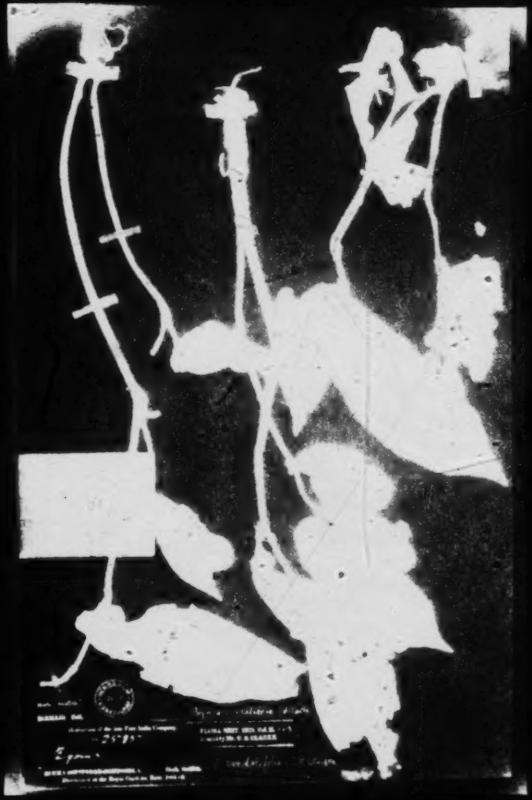


Plate 8.— Begonia hainanensis Chun & F. Chun



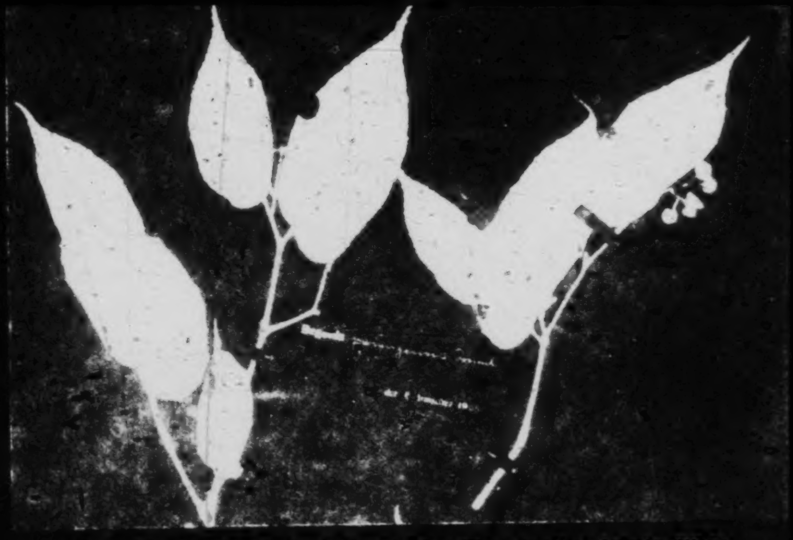
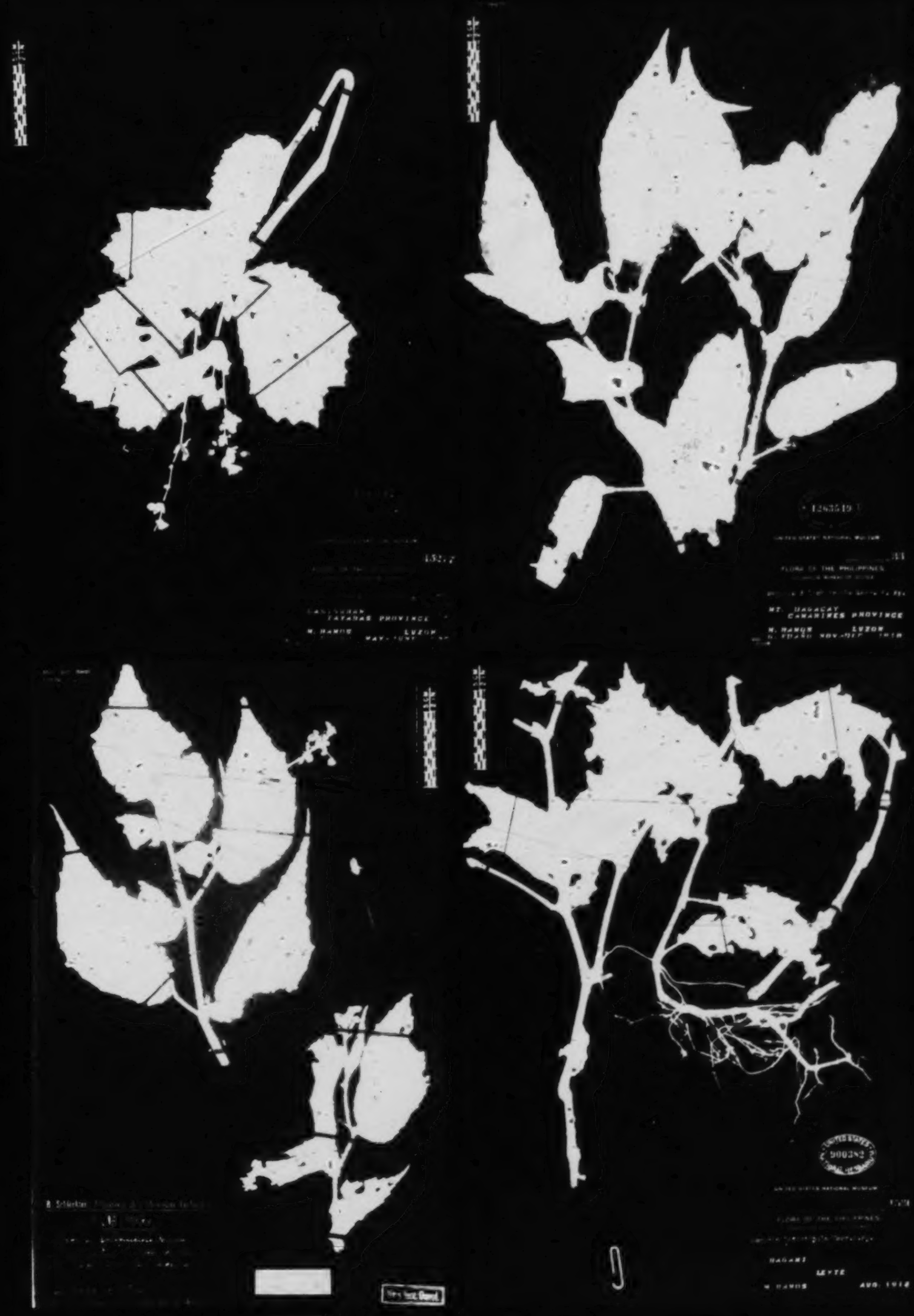
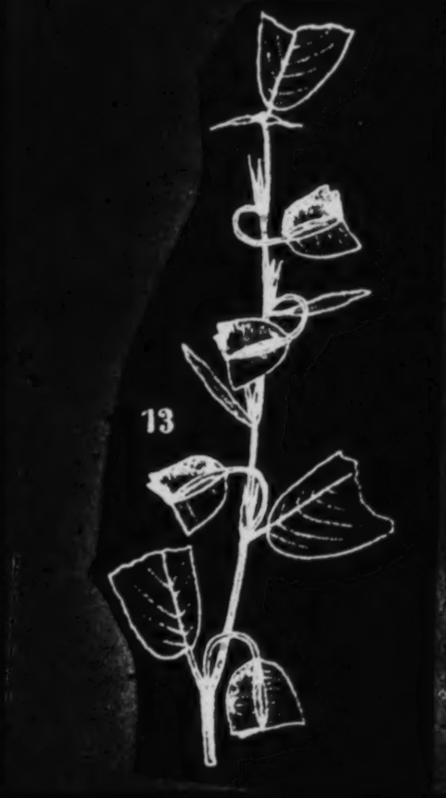


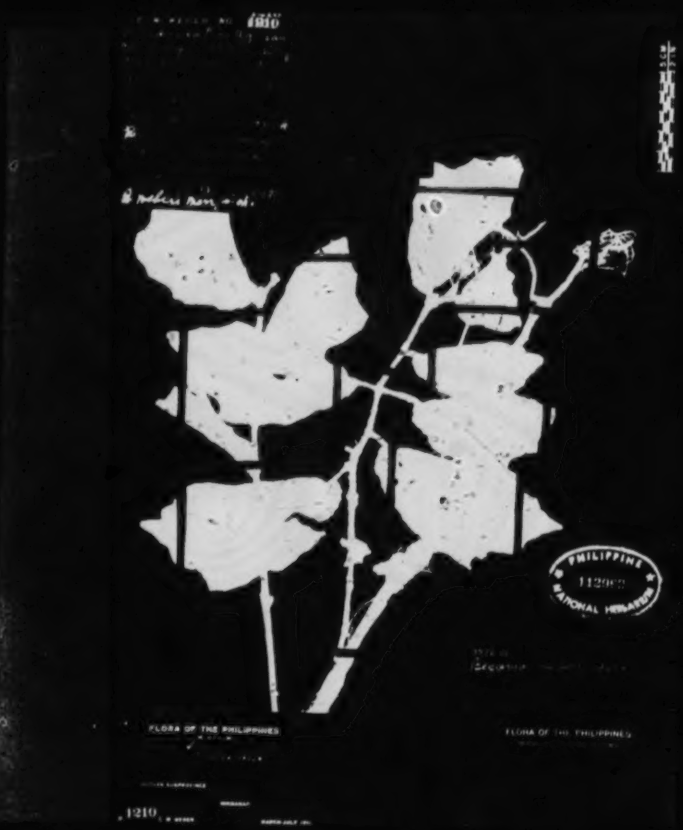
Fig. 1. - *Begonia padangensis* Irmsch. (*Beccari* P.S. n. 136 pr. pte. - Herb. Beccari n. 4807 C.).

21.31, *B. hainanensis*; 21.32, *B. sandalifolia*; 21.33, *B. padangensis*.


TAYABAS PROVINCE
LUZON
1263519
FLORA OF THE PHILIPPINES
CAMARINES PROVINCE
LUZON
900282
FLORA OF THE PHILIPPINES
LEYTE

21.34, *B. casiguranensis;* 21.35, *B. dolichotricha;* 21.36, *B. filibracteosa;* 21.37, *B. latistipula.*




FLORA OF THE PHILIPPINES
PHILIPPINE
NATIONAL HERBARIUM
FLORA OF THE PHILIPPINES
1210

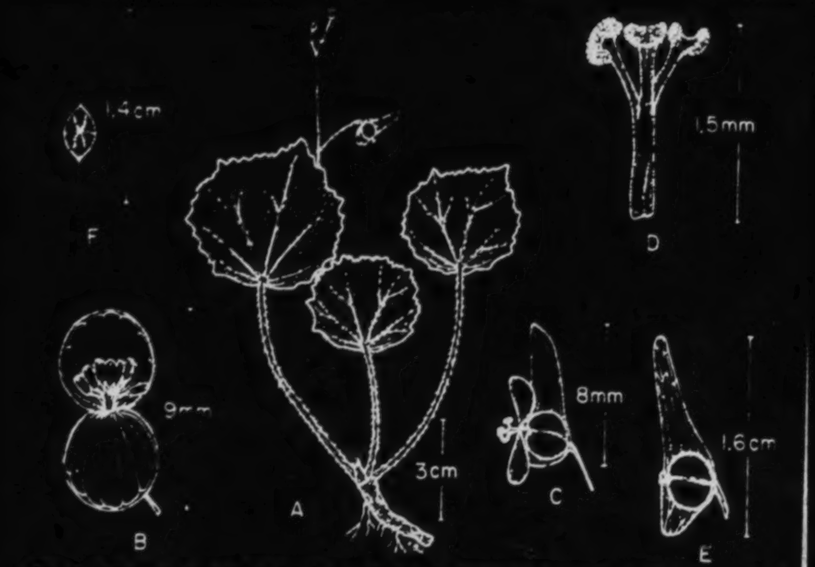

1.4cm
F
1.5mm
D
9mm
B
A
3cm
8mm
C
1.6cm
E

FIG. 2. *Begonia dressleri* Burt-Utley. A. Habit. B. Staminate flower. C. Pistillate flower. D. Sty and stigmas. E. Capsule. F. Cross-section through bilocular ovary. (A–E from *Antonio 3762*; F fr *Dressler 4141*).

21.38, *B. wariana;* 21.39, *B. weberi;* 21.40, *B. dressleri.*

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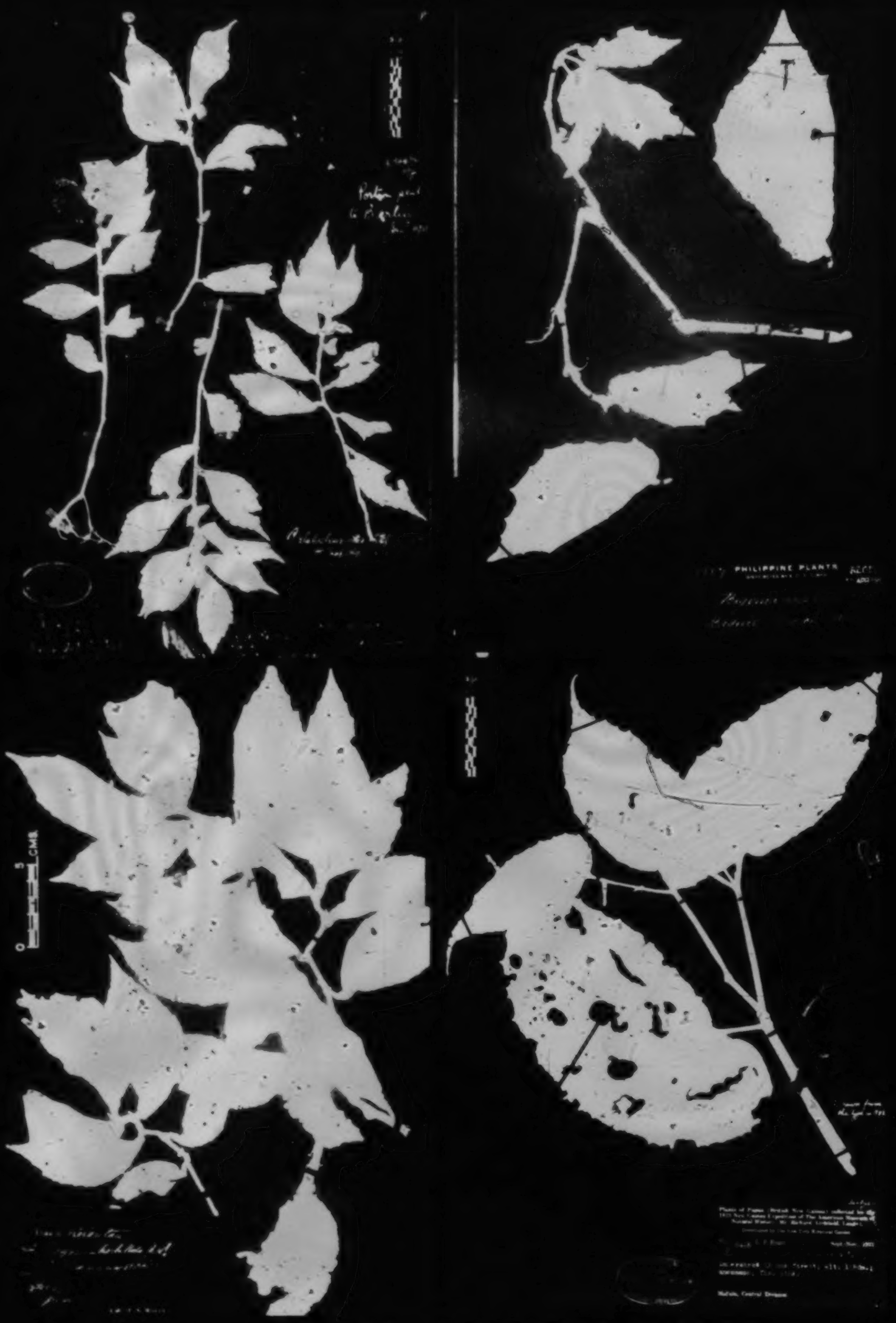
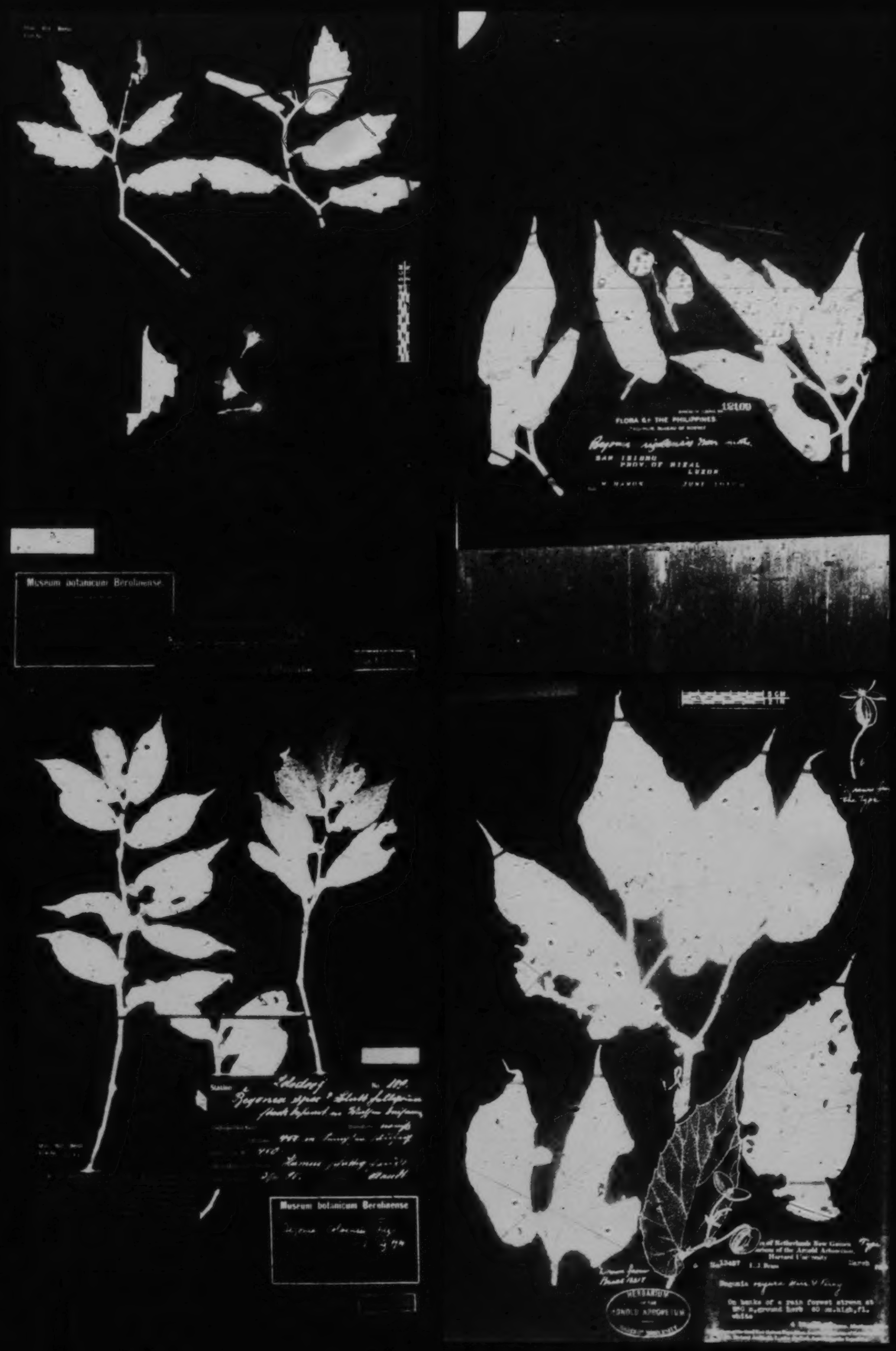
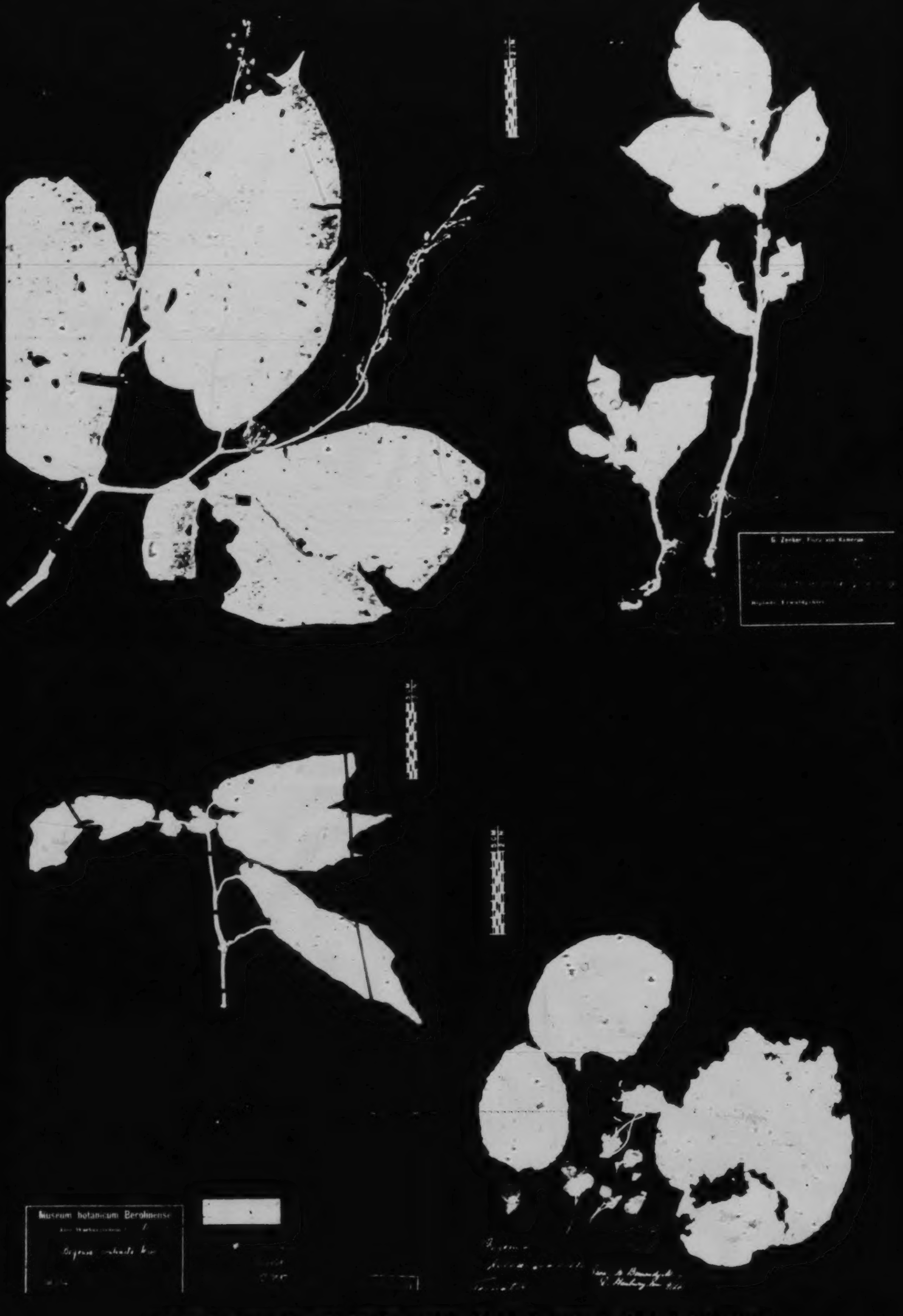

PHILIPPINE PLANTS
0
5
CMS.

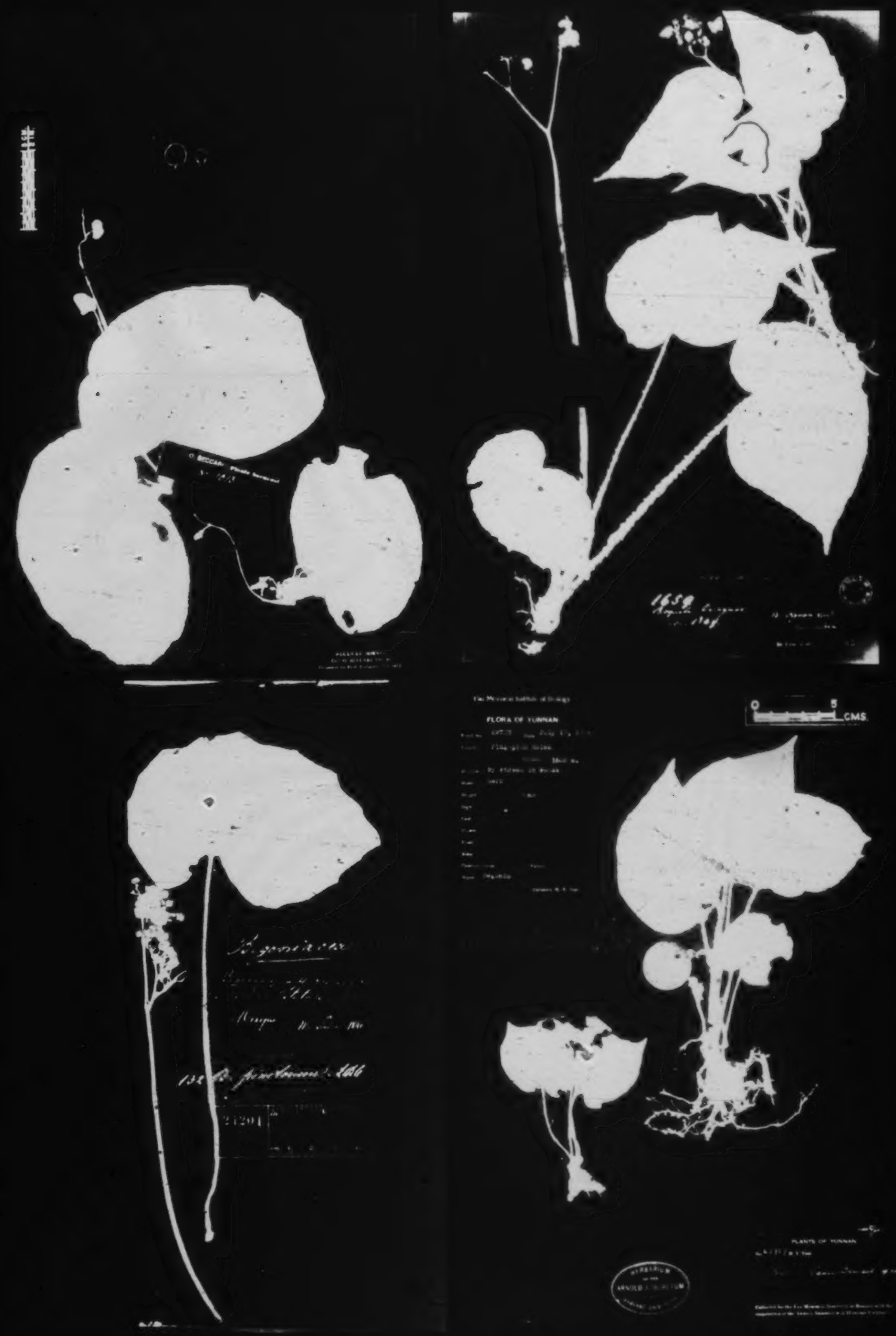
21.41. *B. elctostemmoides*; 21.42. *B. crispipila*; 21.43. *B. barbellata*; 21.44. *B. media*.


Museum botanicum Berolinense
12100
FLORA OF THE PHILIPPINES
Begonia rizalensis Merr.
SAN ISIDRO
PROV. OF RIZAL
LUZON
JUNE
Museum botanicum Berolinense
HERBARIUM
ARNOLD ARBORETUM
Harvard University
Type
Begonia oxyura
On banks of a rain forest stream at
960 m, ground herb 60 cm. high, fl.
white

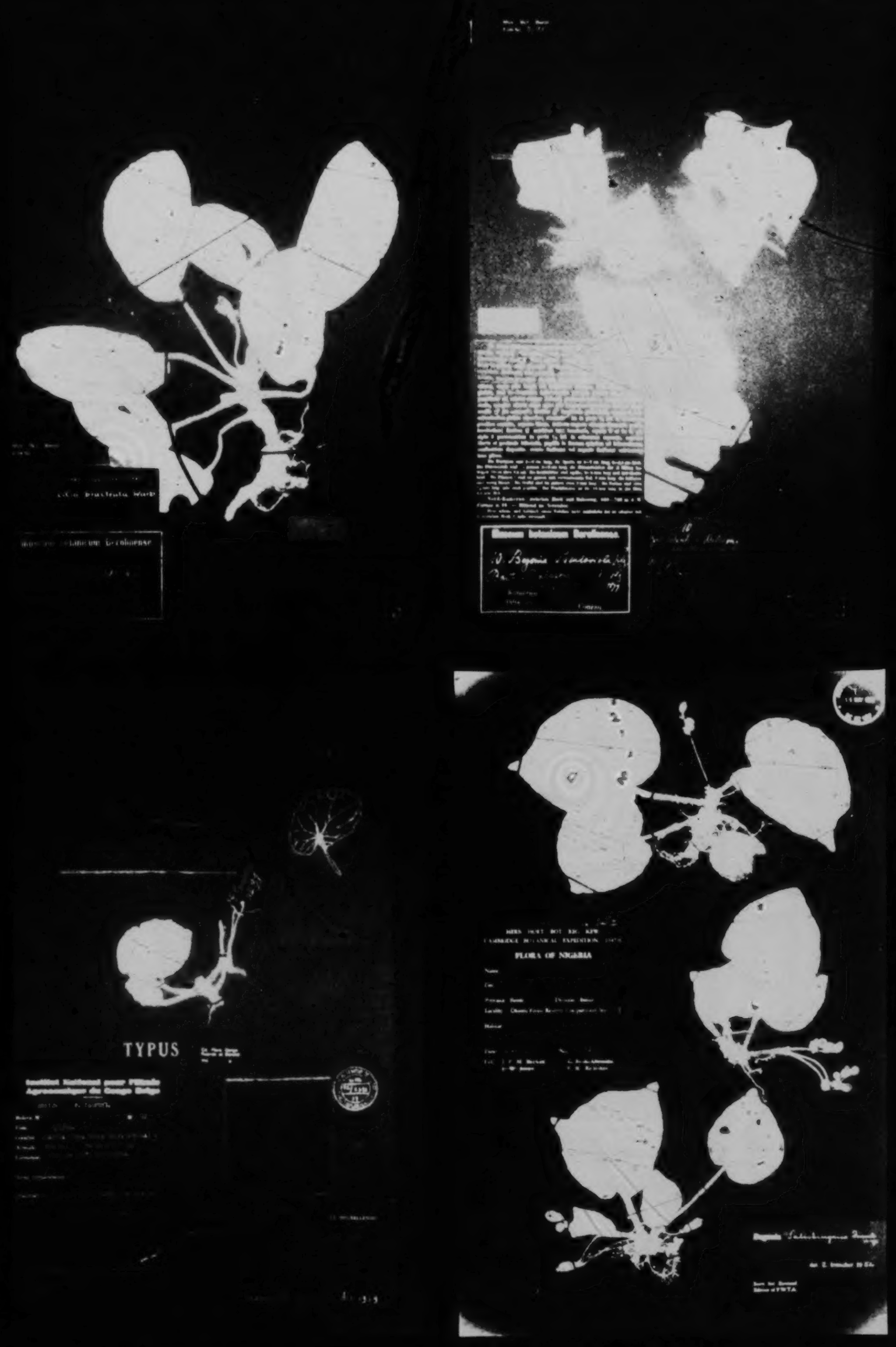
21.45, *B. masarangensis*; 21.46, *B. rizalensis*; 21.47, *B. loloënsis*; 21.48, *B. oxyura*.


G. Zenker. Flora von Kamerun
Museum botanicum Berolinense

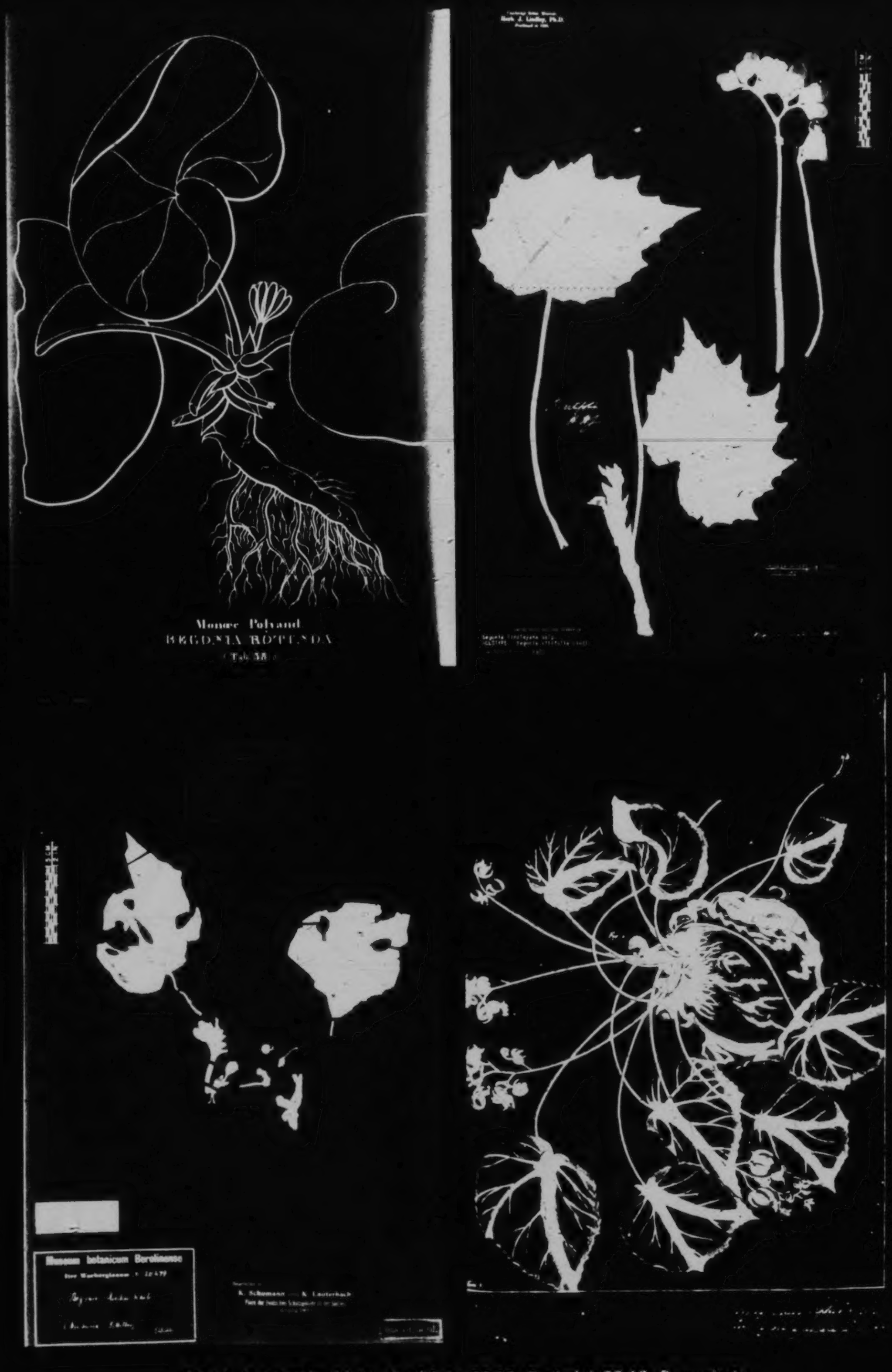
21.49, *B. cincinnifera*; 21.50, *B. sciaphila*; 21.51, *B. contracta*; 22.1, *B. holosericea*.


O. BECCARI
FLORA OF YUNNAN
0
5
CMS.
1659
Begoniaceae
21201
PLANTS OF YUNNAN

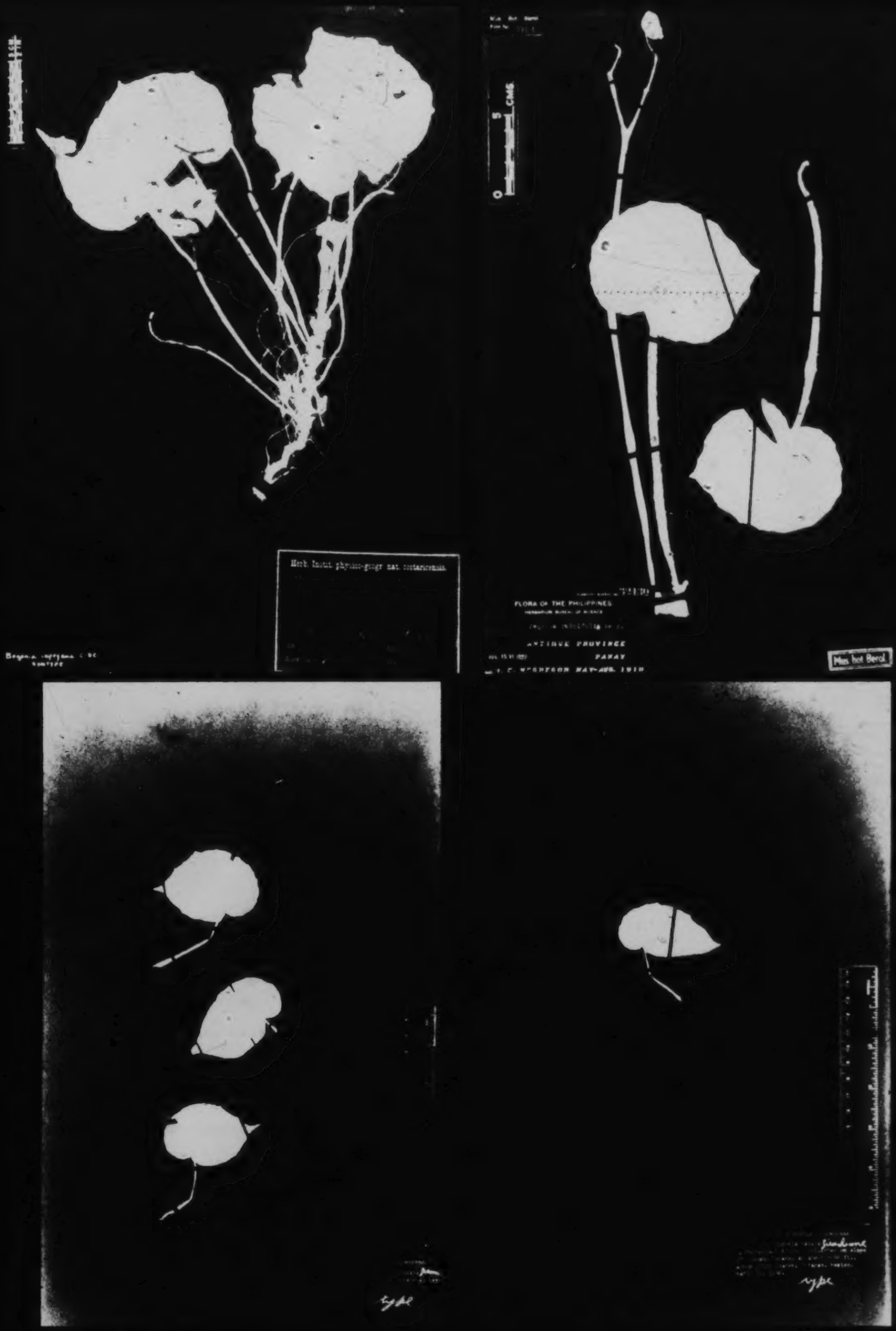
22.2, *B. promethea*; 22.3, *B. boquetensis*; 22.4, *B. pinetorum*; 22.5, *B. tsaii*.



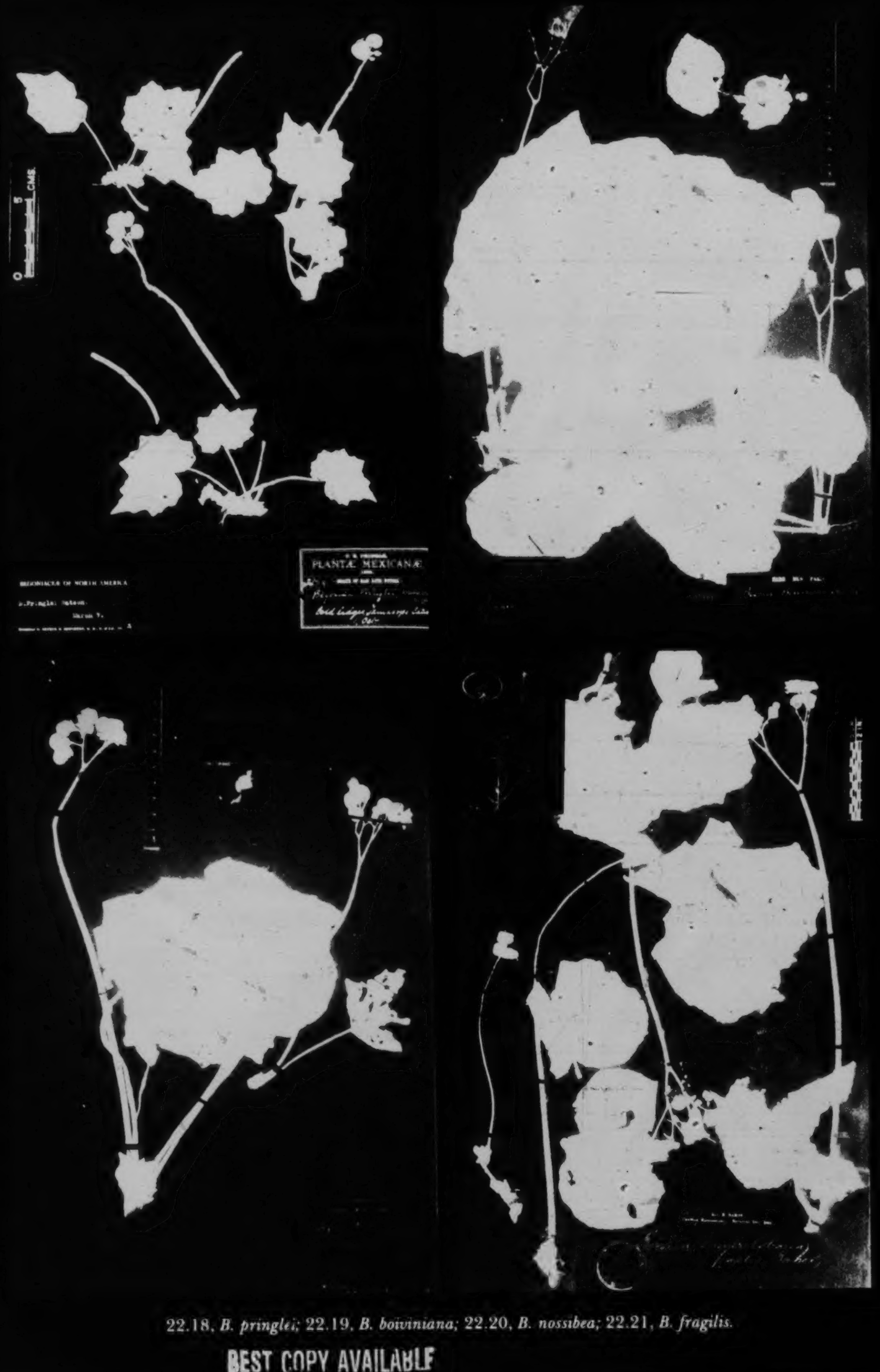
22.6, *B. cilio-bracteata;* 22.7, *B. pseudoviola;* 22.8, *B. comperei;* 22.9, *B. salisburyana.*


Monœc Polyand
BEGONIA ROTUNDA
(Tab. 58.)
Museum botanicum Berolinense
K. Schumann — K. Lauterbach

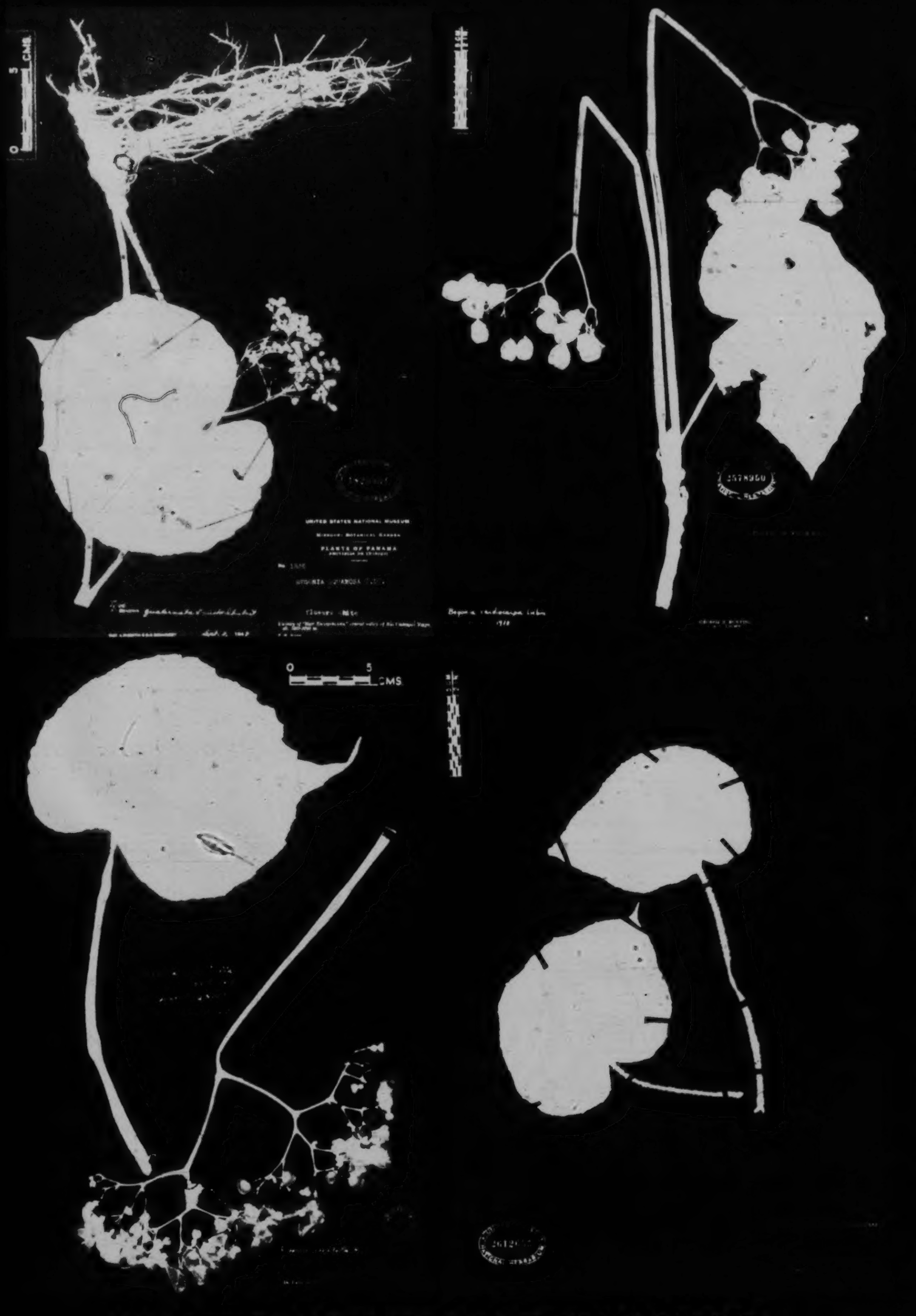
22.10, *B. rotunda*; 22.11, *B. plebeja*; 22.12, *B. rieckei*; 22.13, *B. muricata*.


Herb. Instit. physico-geogr. nat. costaricensis
FLORA OF THE PHILIPPINES
ANTIQUE PROVINCE
PANAY
Mus. bot. Berol.
CMS
type
type

22.14, *B. copeyana;* 22.15, *B. rubrifolia;* 22.16, *B. cristobalensis,* 22.17, *B. tacanana.*


0
5
CMS.
BEGONIACEAE OF NORTH AMERICA
PLANTÆ MEXICANÆ

22.18, *B. pringlei;* 22.19, *B. boiviniana;* 22.20, *B. nossibea;* 22.21, *B. fragilis.*


0
5
CMS.
UNITED STATES NATIONAL MUSEUM
PLANTS OF PANAMA
0
5
CMS.

22.22, *B. quaternata;* 22.23, *B. cardiocarpa;* 22.24, *B. urophylla;* 22.25, *B. hispidivillosa.*

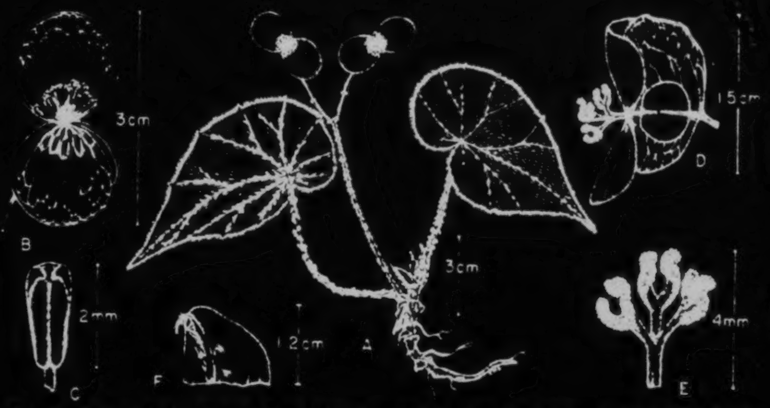
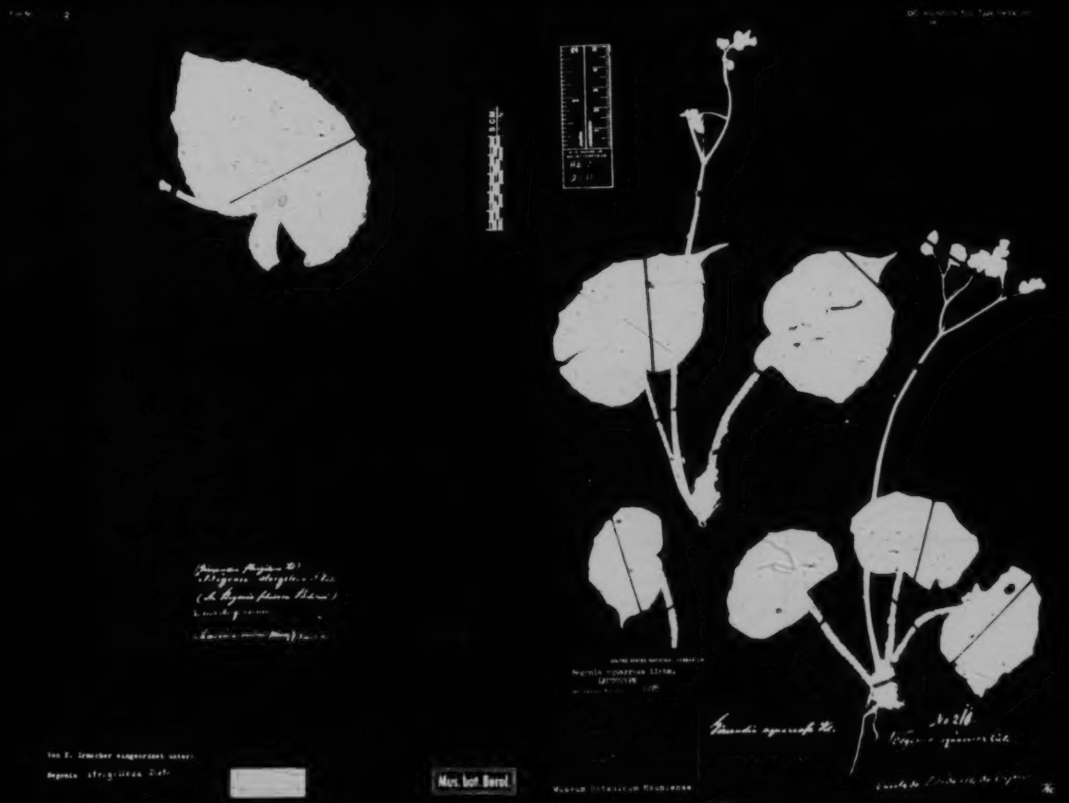
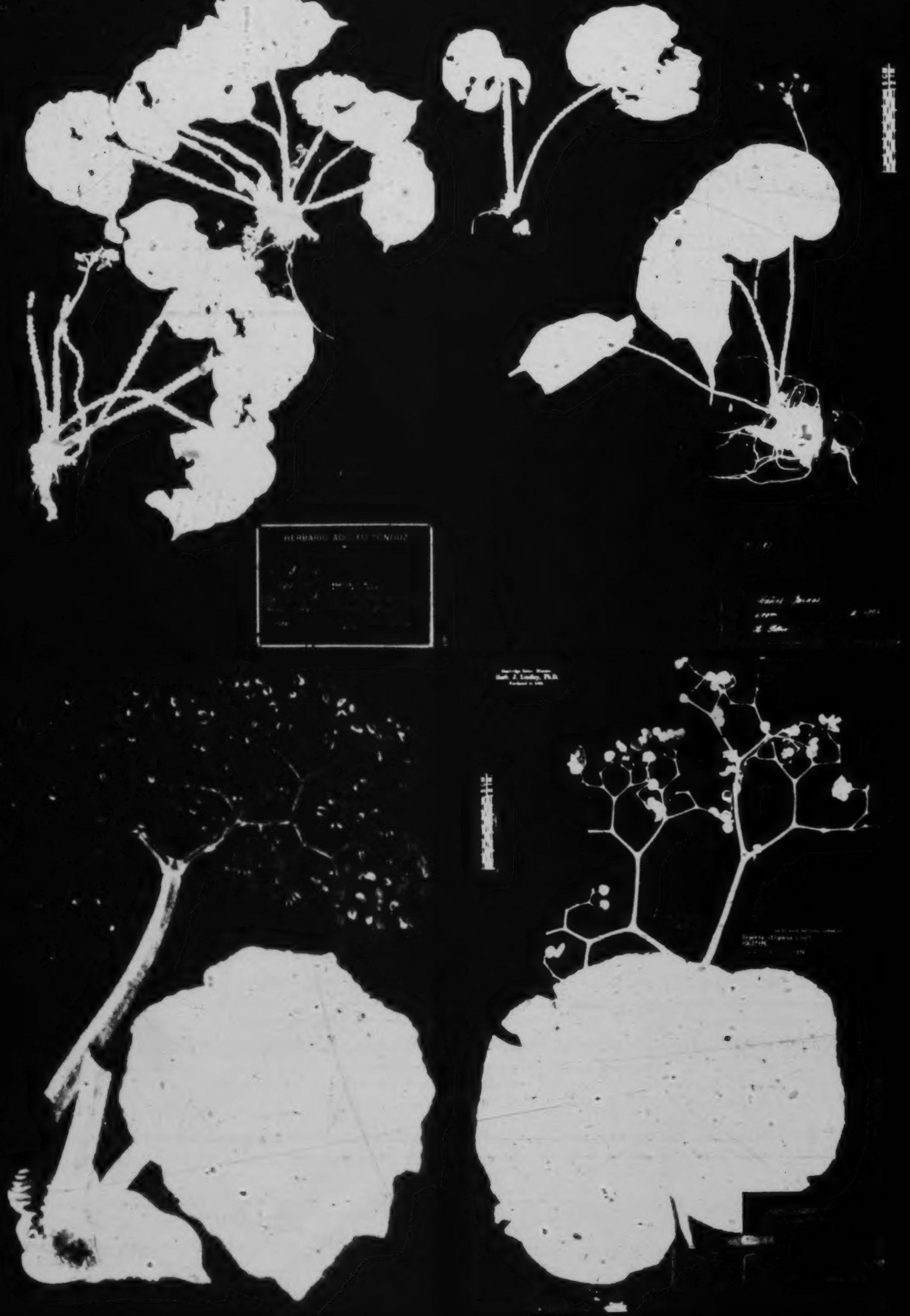

3cm
B
C
2mm
F
1 2cm
A
3cm
1.5cm
D
4mm
E

FIG. 4. *Begonia louis-williamsii* Burt-Utley. A. Habit. B. Staminate flower. C. Stamen. D. Pistillate flower. E. Styles and stigmas. F. Stipule. (from *Williams, Molina & Williams 25822*).

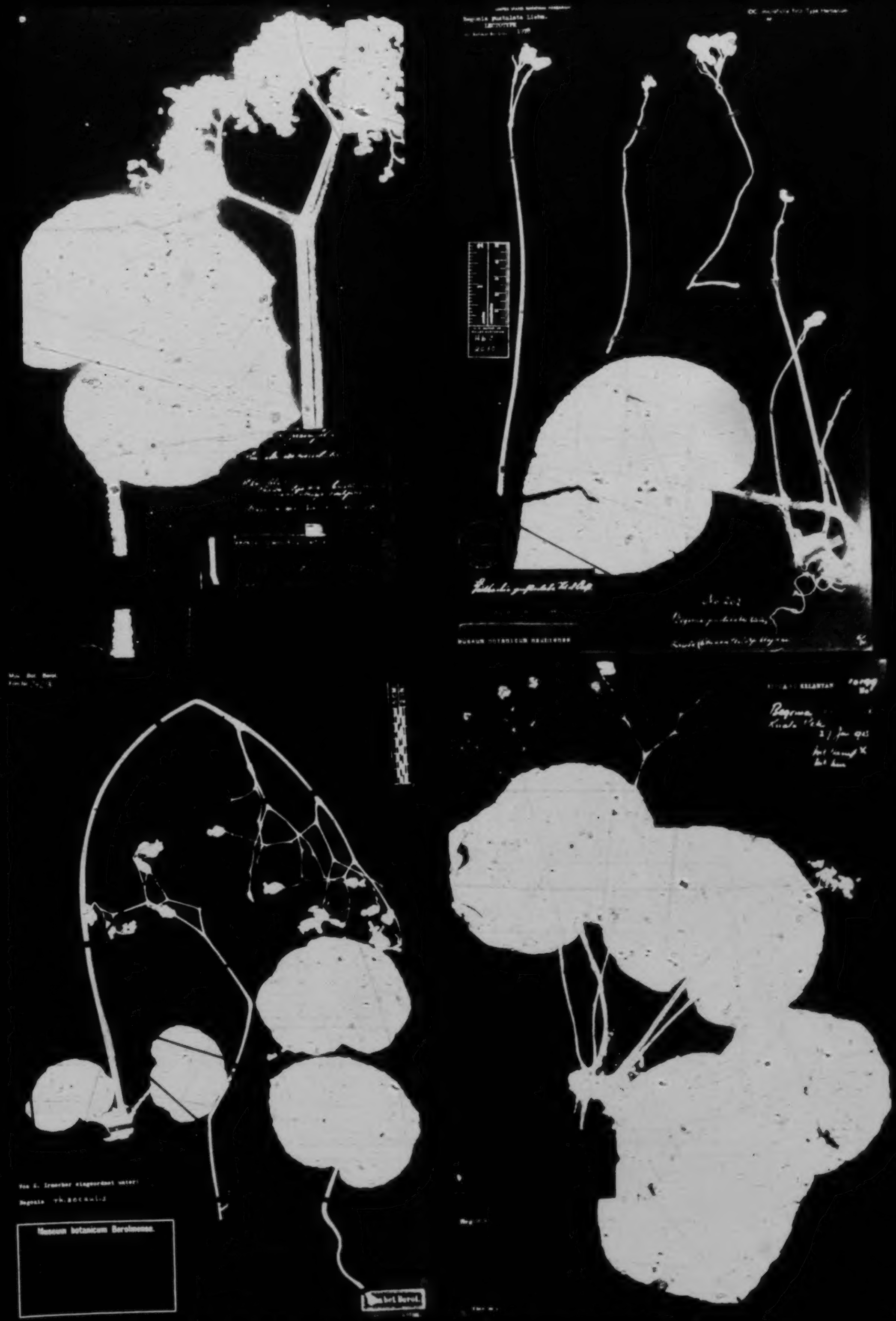

Mus. bot. Berol.
Museum Botanicum Hauniense
No 210

22.26, *B. louis-williamsii*; 22.27, *B. strigillosa*; 22.28, *B. squarrosa*.

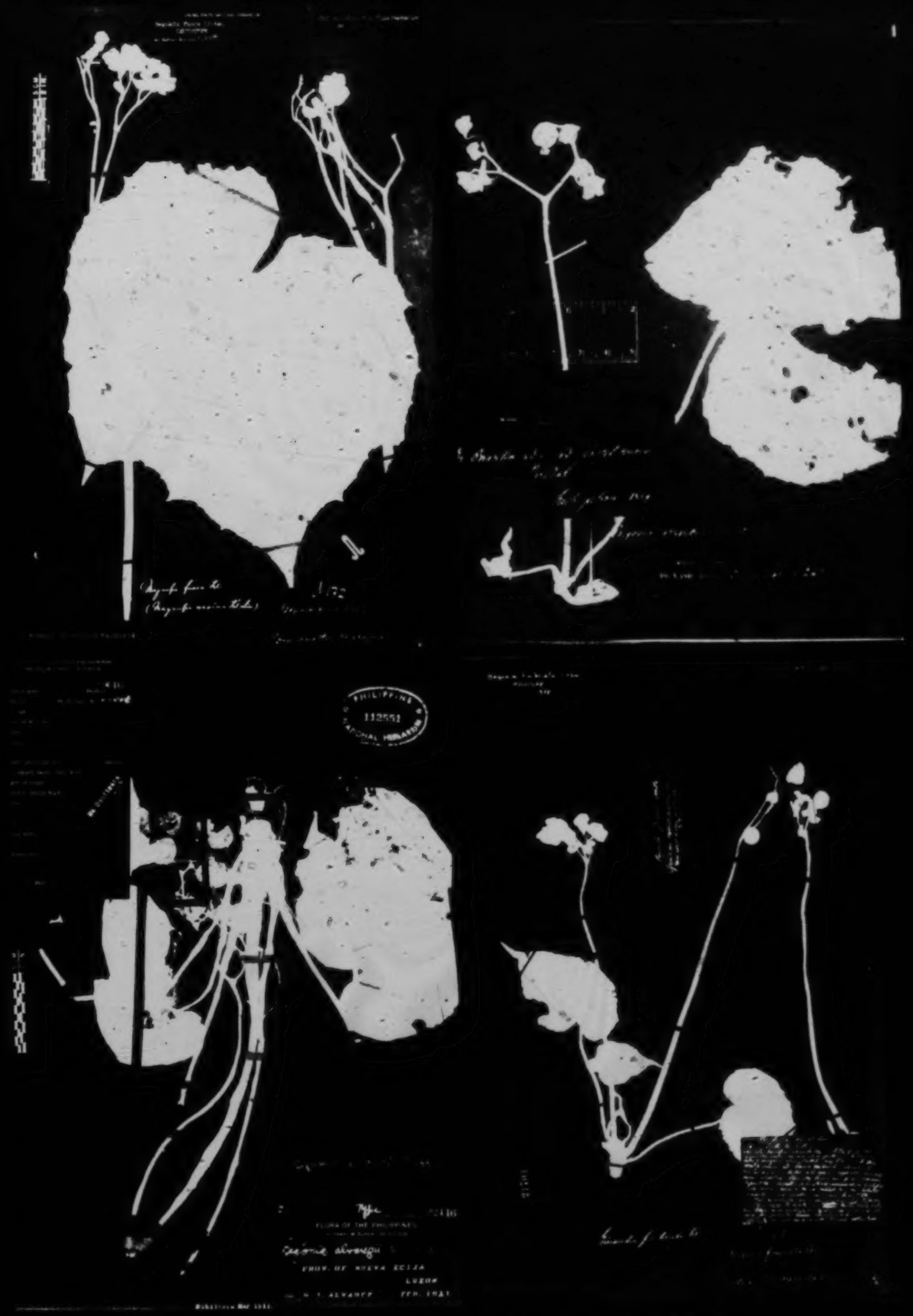
BEST COPY AVAILABLE



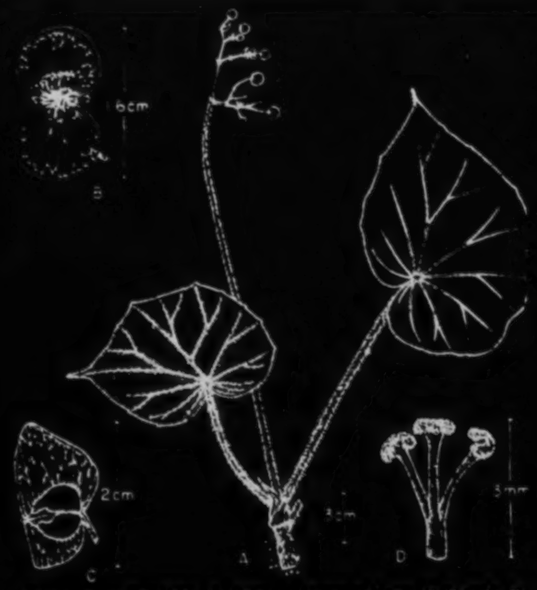
22.29, *B. vestita;* 22.30, *B. squamosa;* 22.31, *B. barkeri;* 22.32, *B. stigmosa.*


Museum botanicum Berolinense.
KELANTAN

22.33, *B. peponifolia;* 22.34, *B. pustulata;* 22.35, *B. rhizocaulis;* 22.36, *B. foxworthyi.*


PHILIPPINE NATIONAL HERBARIUM
112551
FLORA OF THE PHILIPPINES
PROV. OF NUEVA ECIJA
LUZON
FEB. 1941

22.37, *B. fusca*; 22.38, *B. membranacea*; 22.39, *B. alvarezii*; 22.40, *B. fimbriata*.

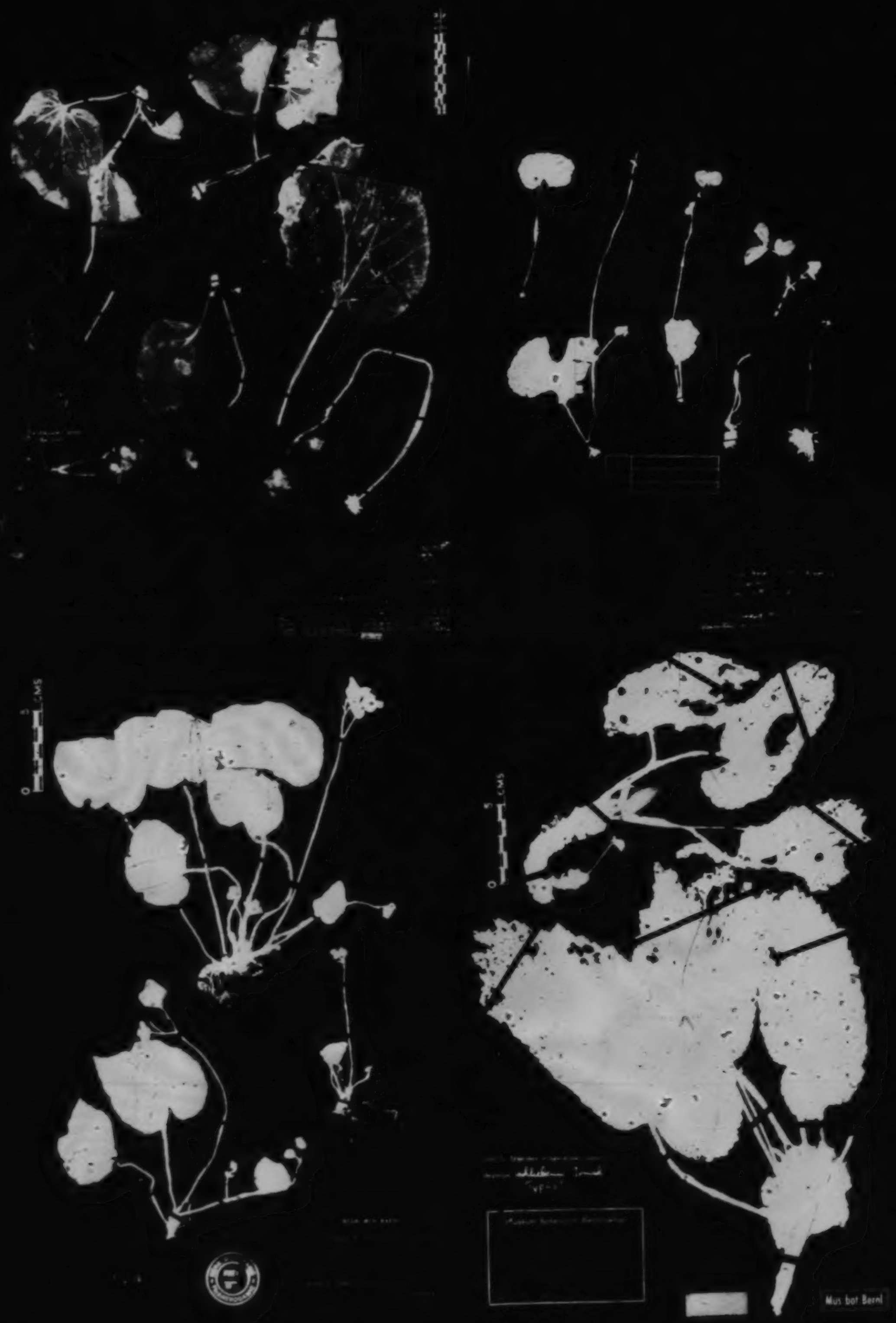

6cm
B
2cm
C
A
3cm
D
3mm

Begonia morii Burt-Utley. A. Habit. B. Staminate flower. C. Capsule. D. (from *Mori, Kallunki & Gentry 4204*).

Mus. Bot. Berol.

Mus. bot. Berol.
Museum botanicum Berolinense

22.41, *B. morii*; 22.42, *B. sericoneura*; 23.1, *B. garagarana*; 23.2, *B. prostrata*.


0
5
CMS
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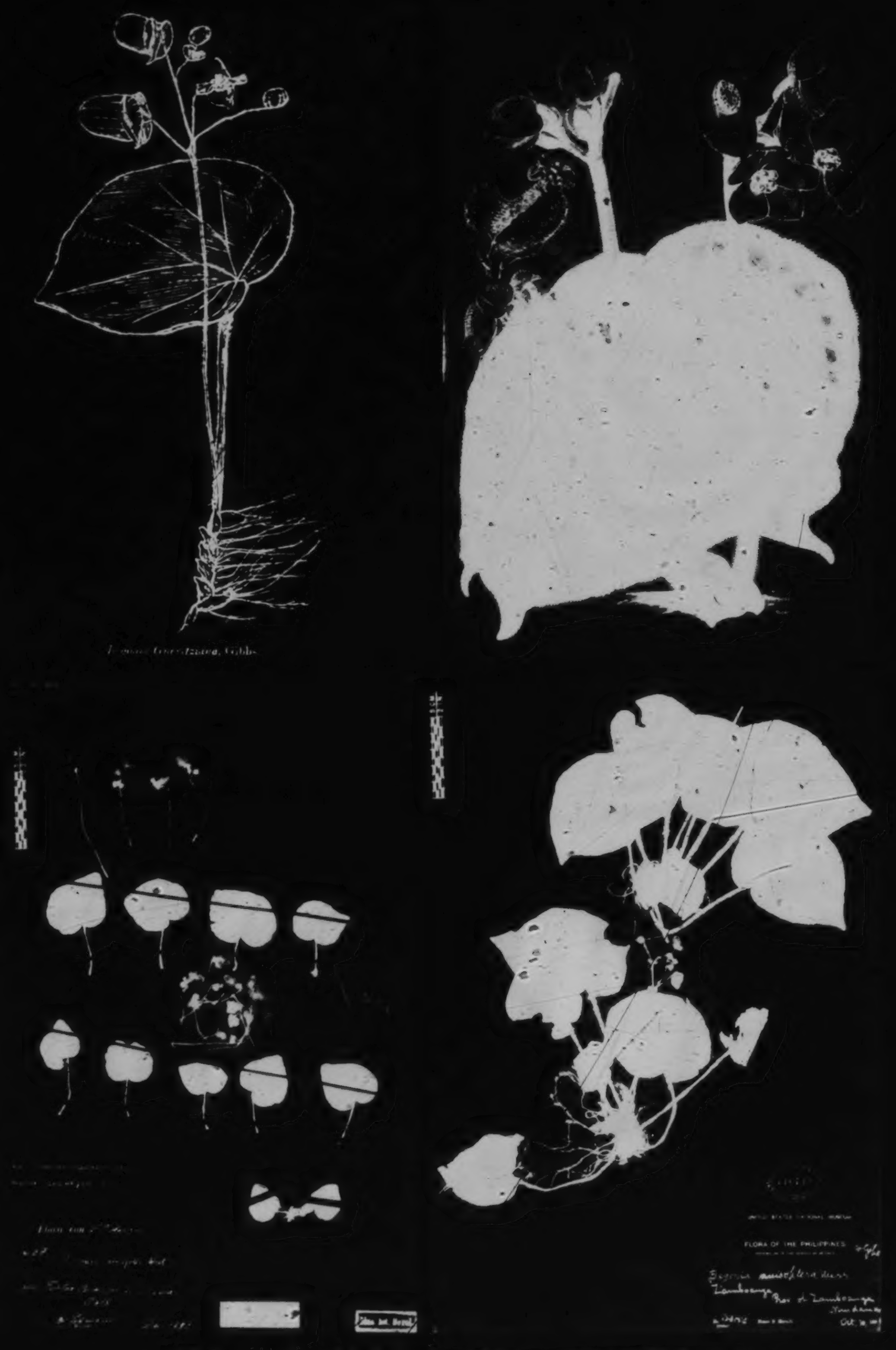
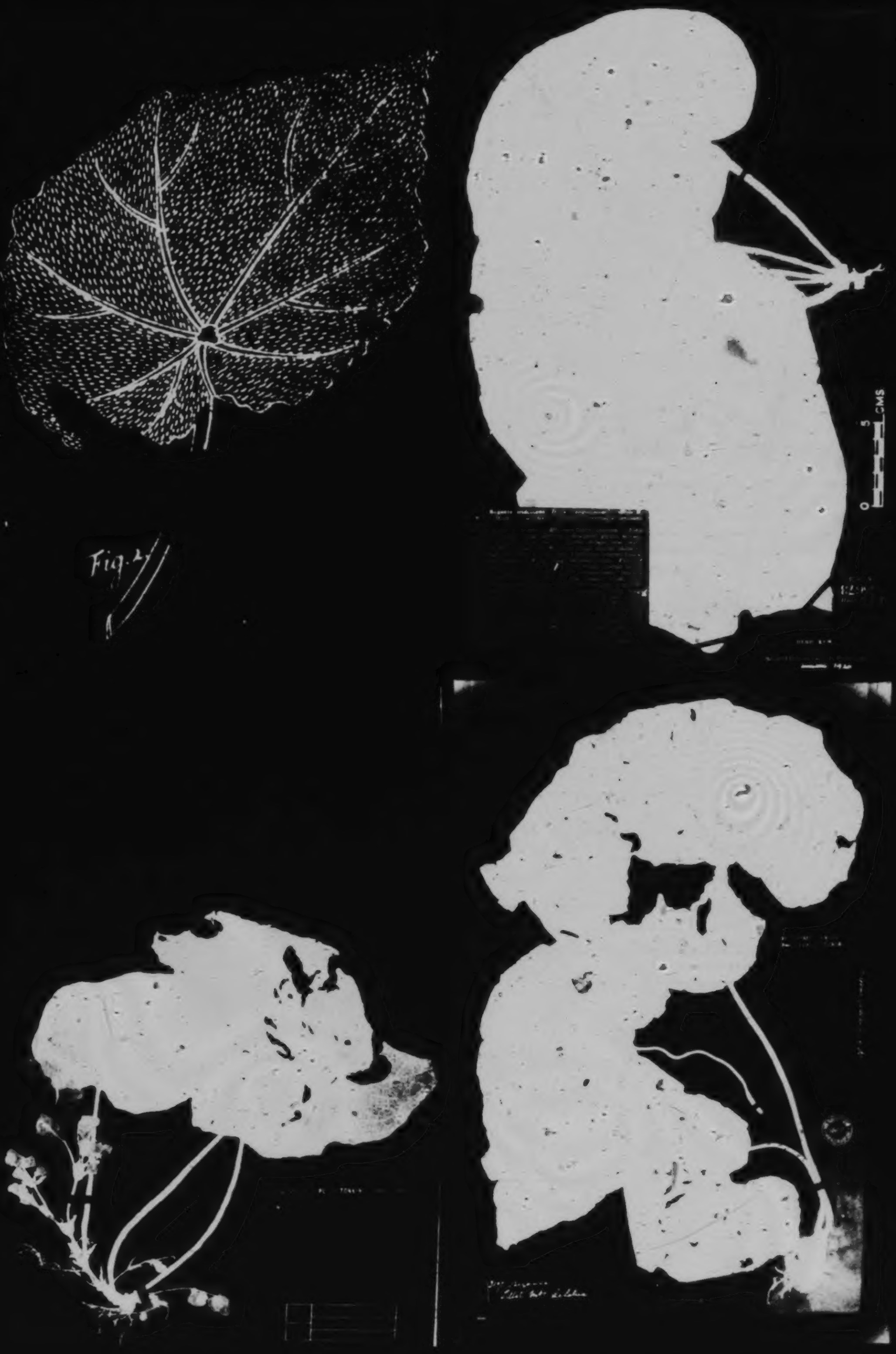
CMS
Mus bot Bern

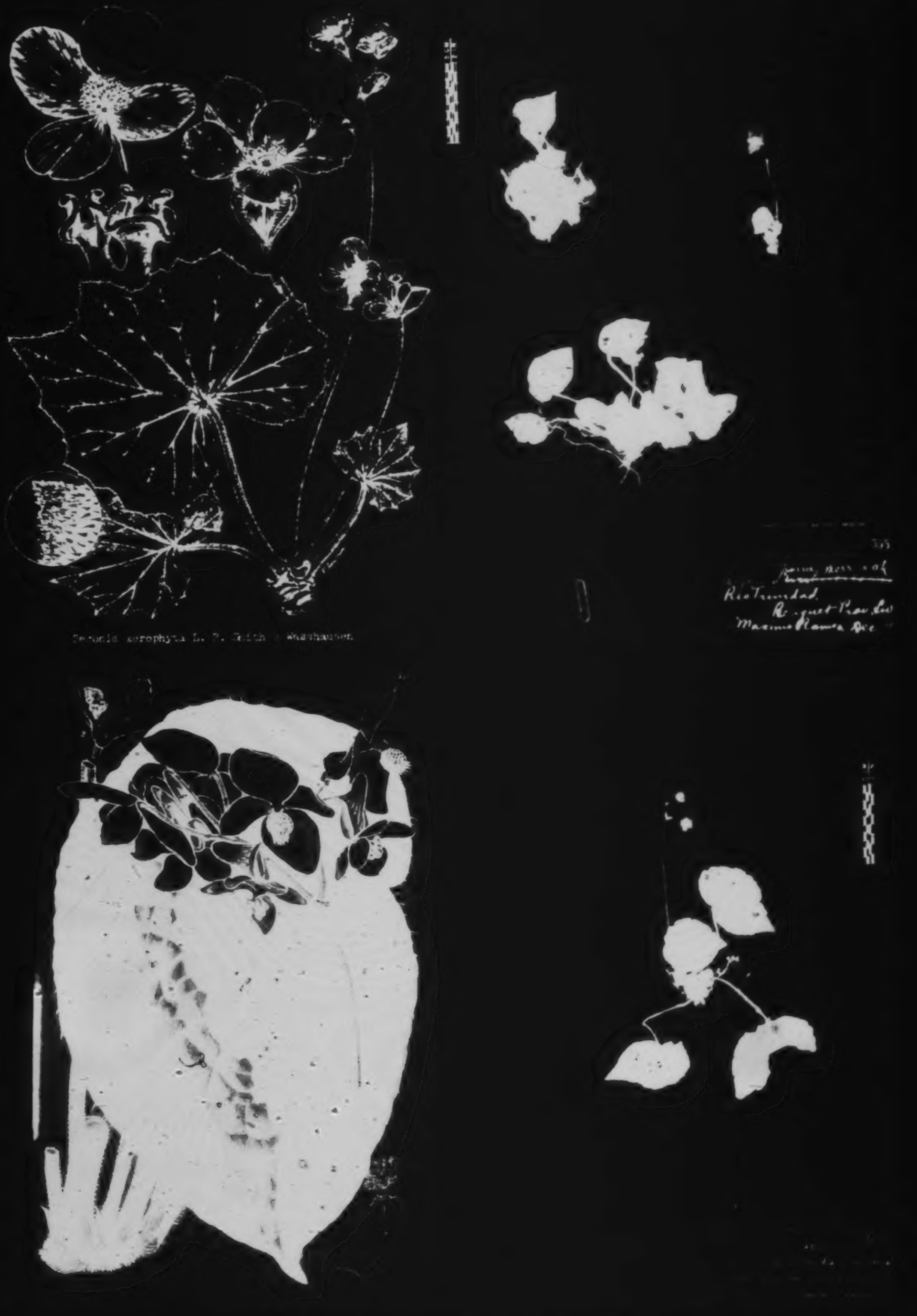
23.3, *B. acaulis;* 23.4, *B. soluta;* 23.5, *B. duclouxii;* 23.6, *B. schliebenii.*


Begonia Gueritziana, Gibbs.
FLORA OF THE PHILIPPINES
Begonia anisoptera
Zamboanga Prov. of Zamboanga

23.7, *B. gueritziana;* 23.8, *B. annulata;* 23.9, *B. ionophylla;* 23.10, *B. anisoptera.*



23.11, *B. repens;* 23.12, *B. iridescens;* 23.13, *B. balansana;* 23.14, *B. silletensis.*


Begonia xerophyta L. B. Smith & Wasshausen
Rio Trinidad.
Maximo Ramos

23.15, *B. xerophyta*; 23.16, *B. parva*; 23.17, *B. rex*; 23.18, *B. leuconeura*.

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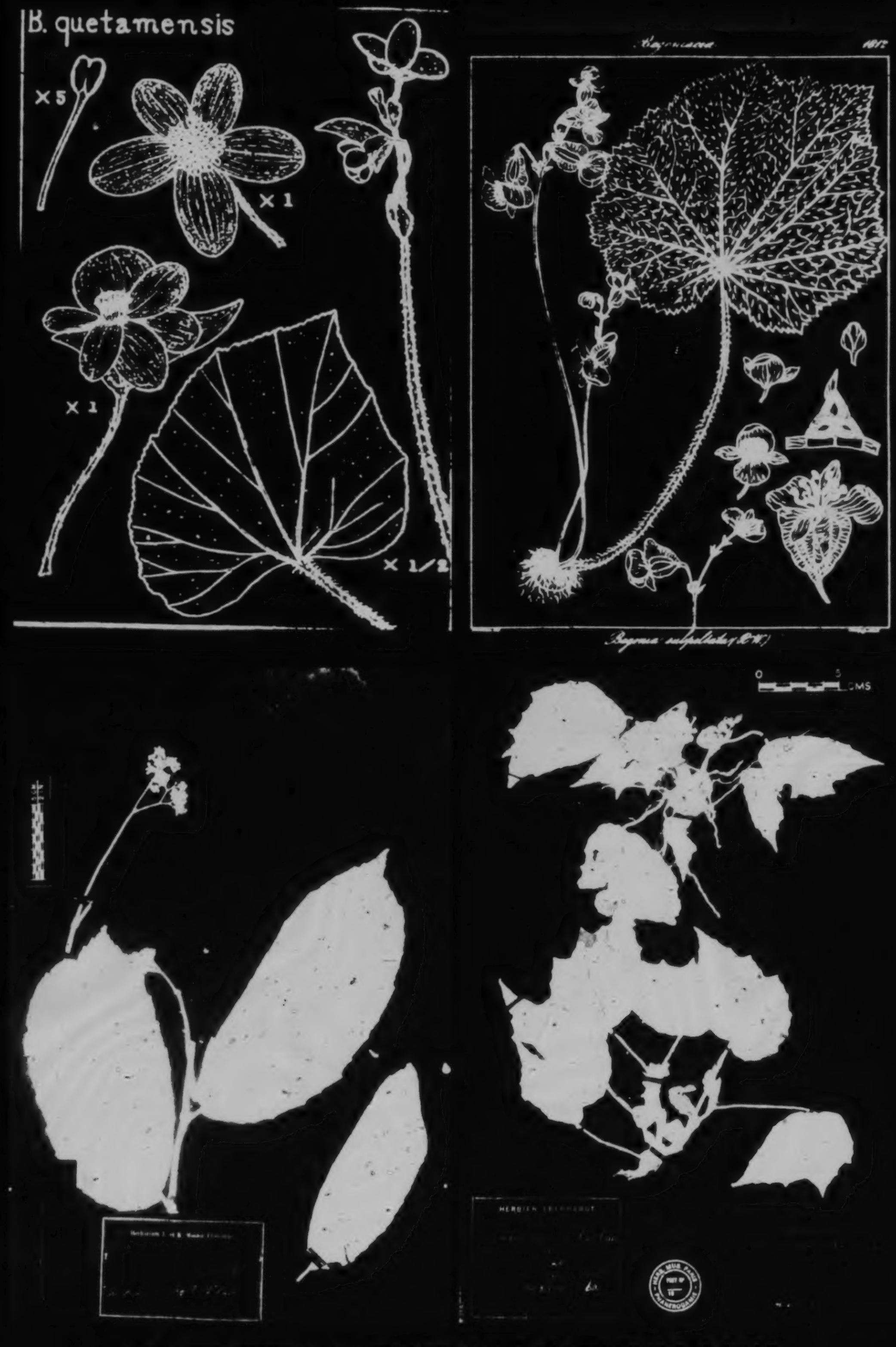
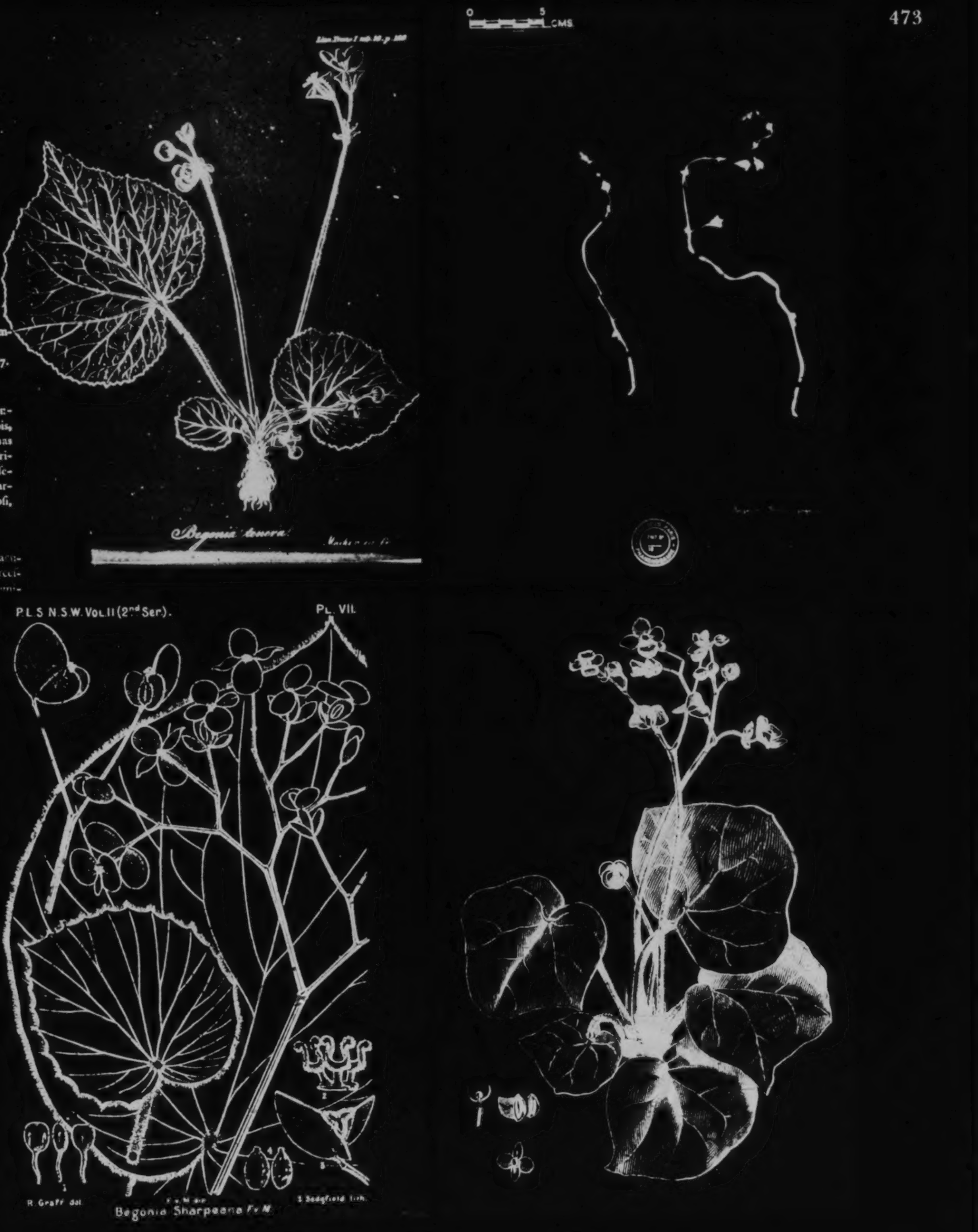
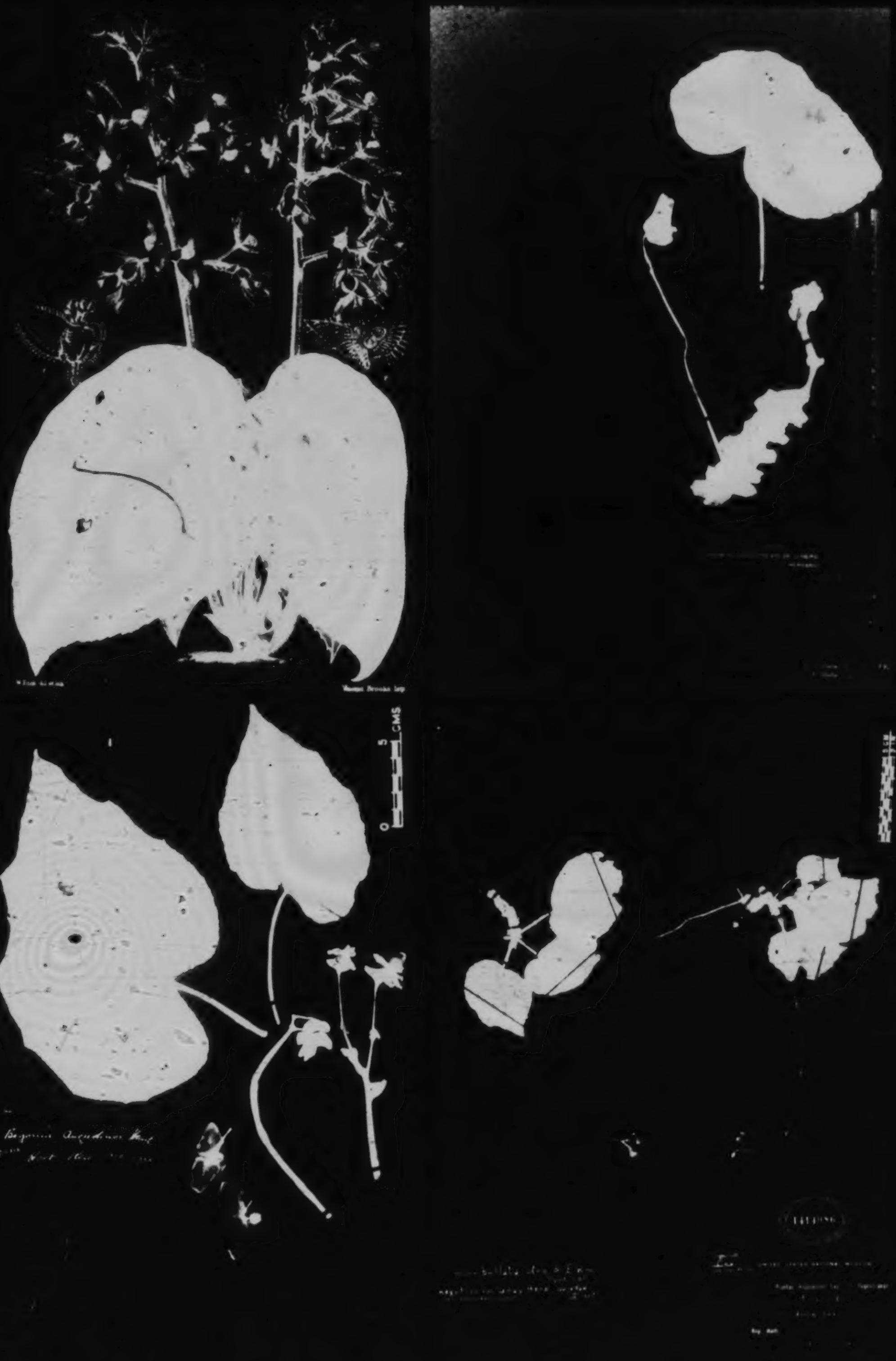

B. quetamensis
×5
×1
×1
×1/2
Begoniaceae
1817
Begonia subpeltata (R.W.)
0
5
CMS
HERBIER LECOMTE
HERB. MUS. PARIS

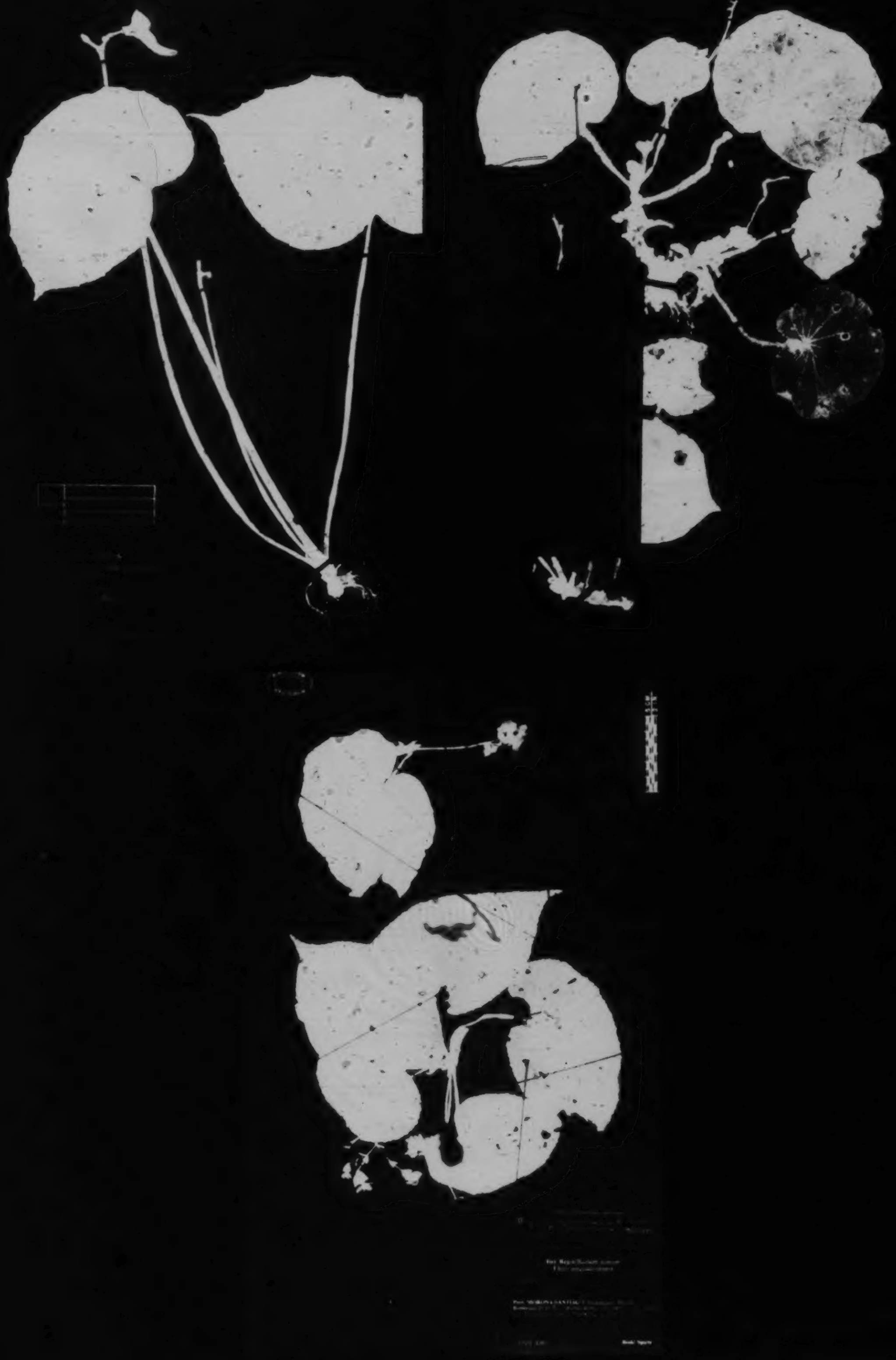
23.19, *B. novogranatae;* 23.20, *B. subpeltata;* 23.21, *B. arborensis;* 23.22, *B. eberhardtii.*


0 5 CMS
Begonia tenera
P.L.S. N.S.W. Vol. II (2nd Ser.).
PL. VII
1
2
3
4
5
R. Graff del.
F.v.M. dir.
S. Sedgfield lith.
Begonia Sharpeana F.v.M.

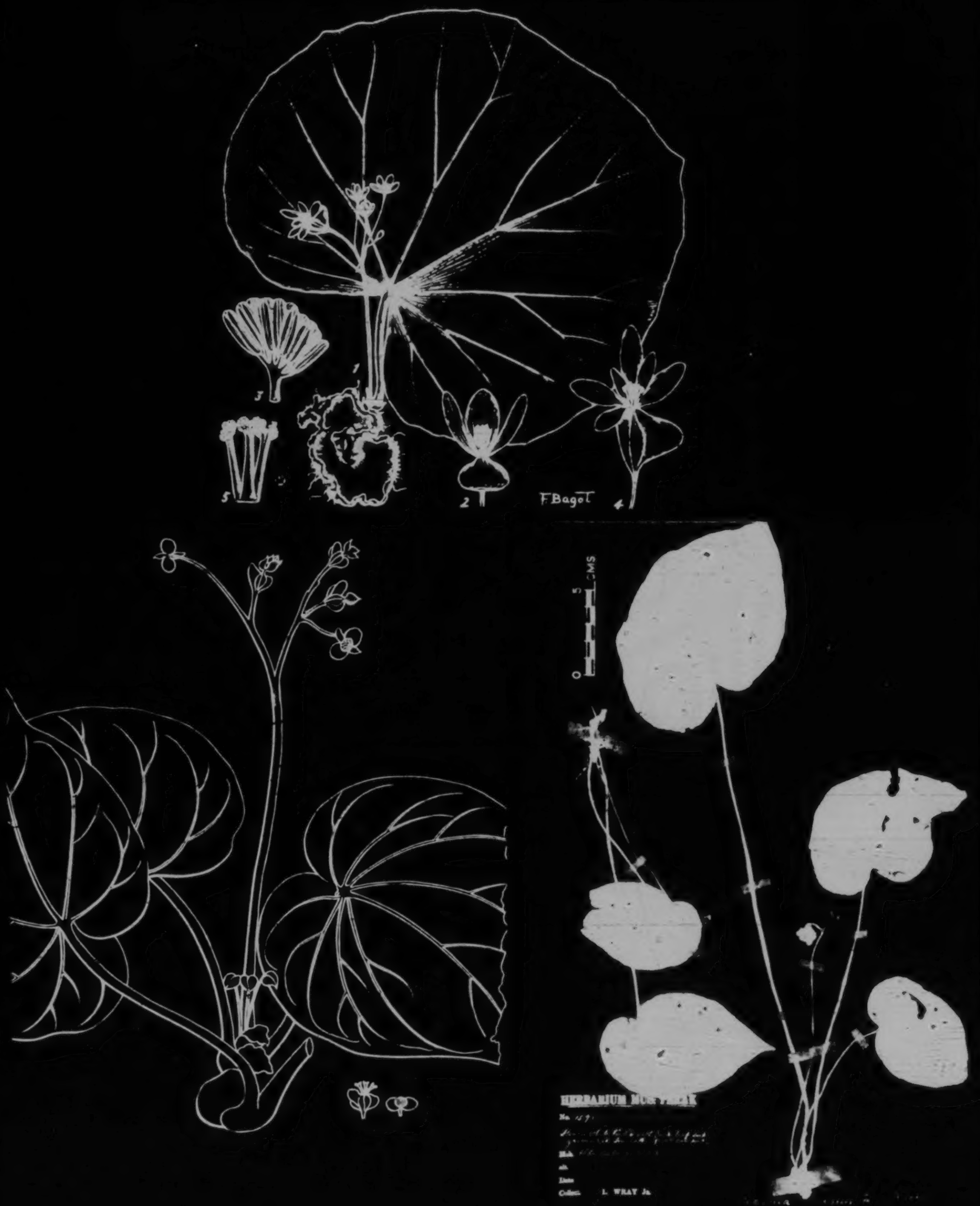
23.23, *B. tenera;* 23.24, *B. pierrei;* 23.25, *B. sharpeana;* 23.26, *B. nigritarum.*



23.27, *B. glandulifera*; 23.28, *B. organensis*; 23.29, *B. augustinei*; 23.30, *B. bullata*.



23.31, *B. prolixa*; 23.32, *B. rubropilosa*; 23.33, *B. sparreana*.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F Bagot
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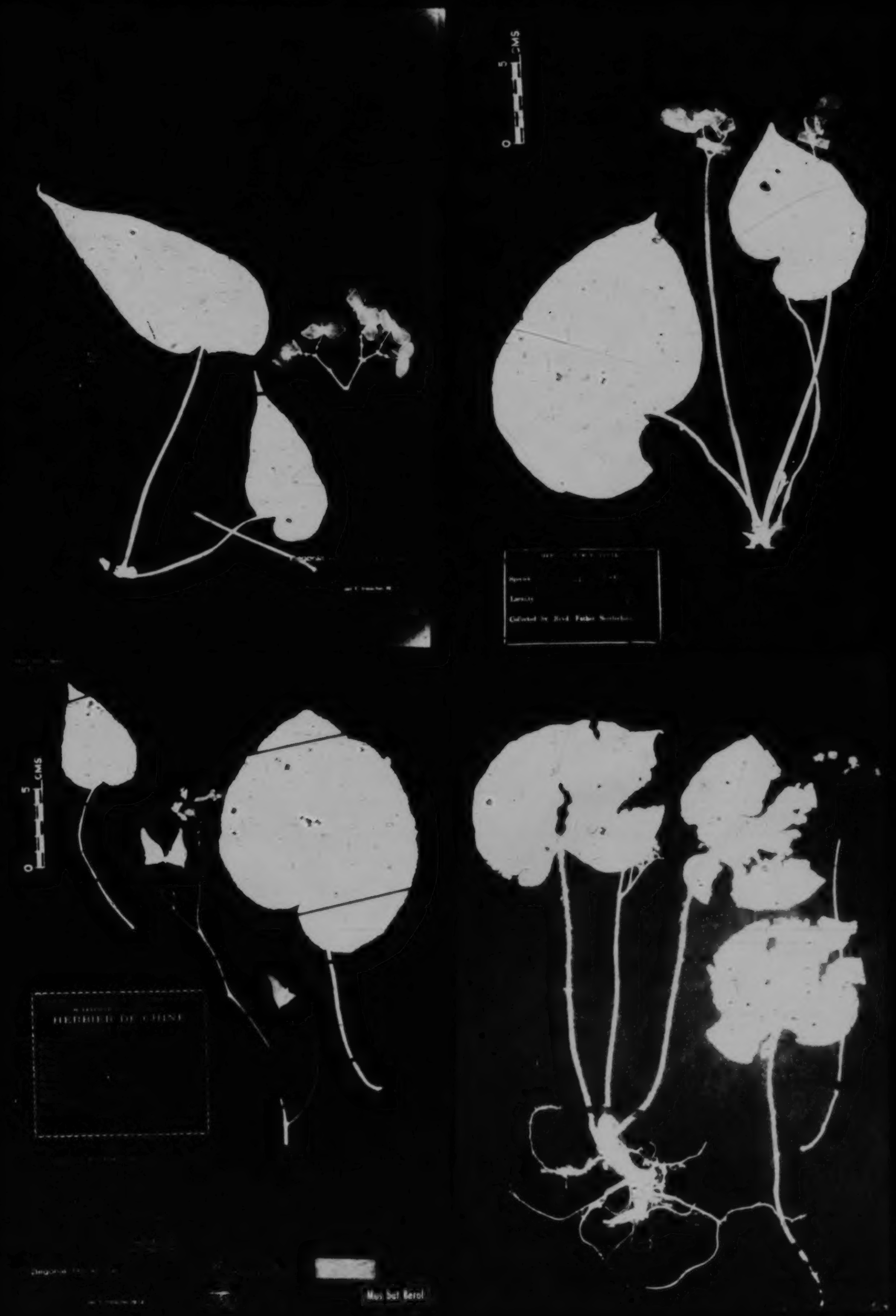
HERBARIUM MUS PERAK
No.
Hab.
alt.
Date
Collr. L. WRAY Jr.

24.1. *B. androrangensis*; 24.2 *B. cordata*; 24.3. *B. venusta.*


0
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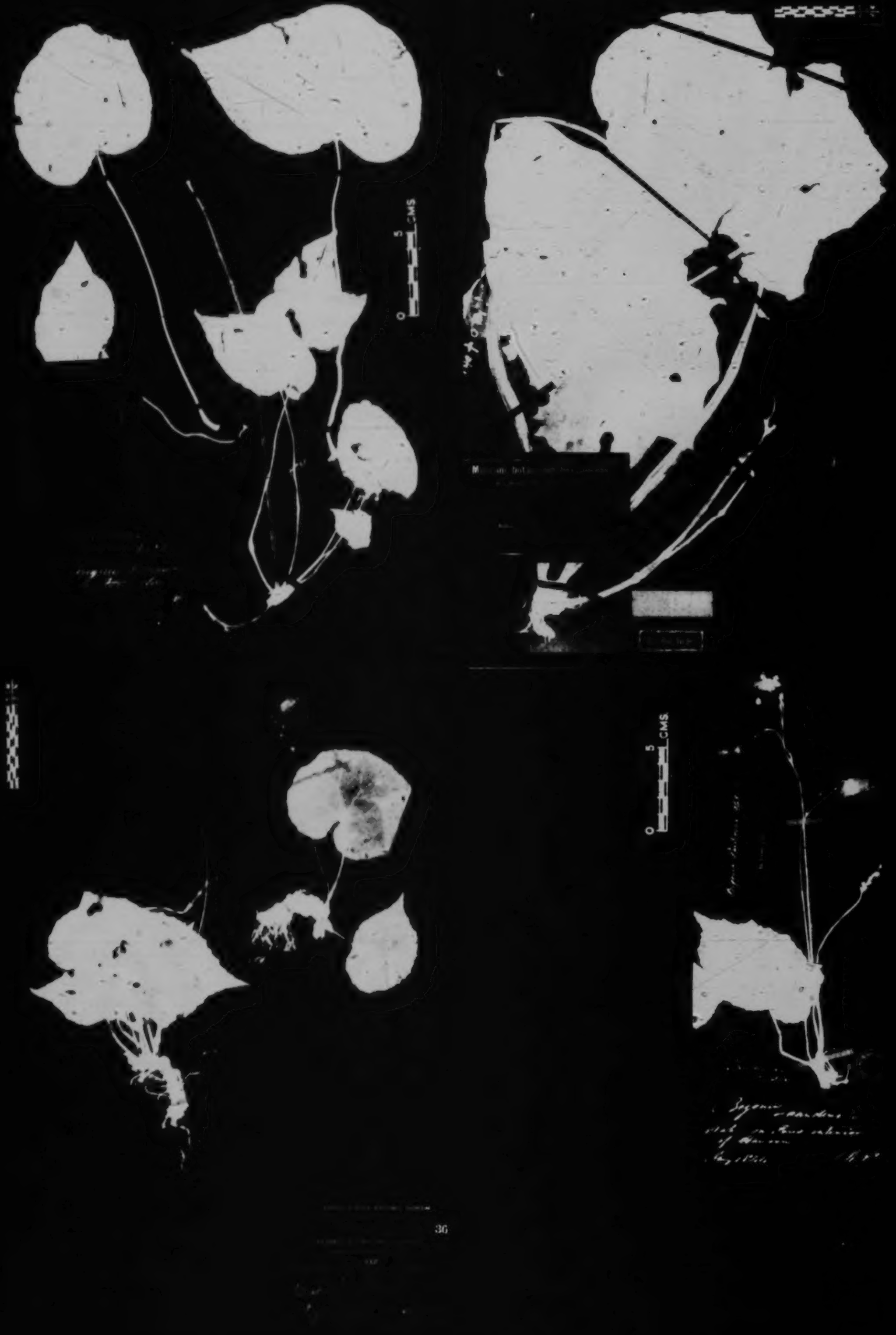
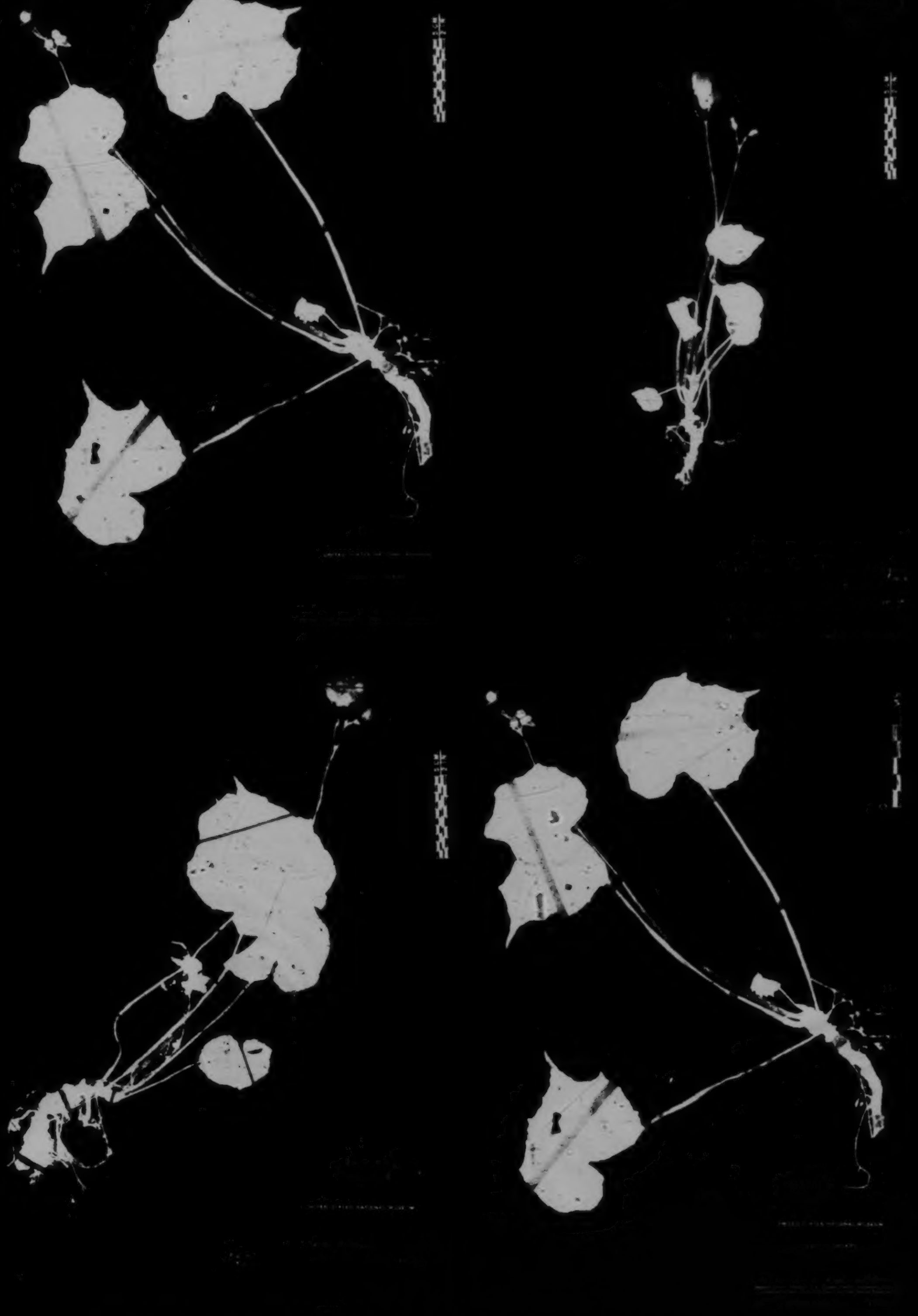
CMS
HERBIER DE CHINE
Mus bot Berol
Collected by Revd. Father

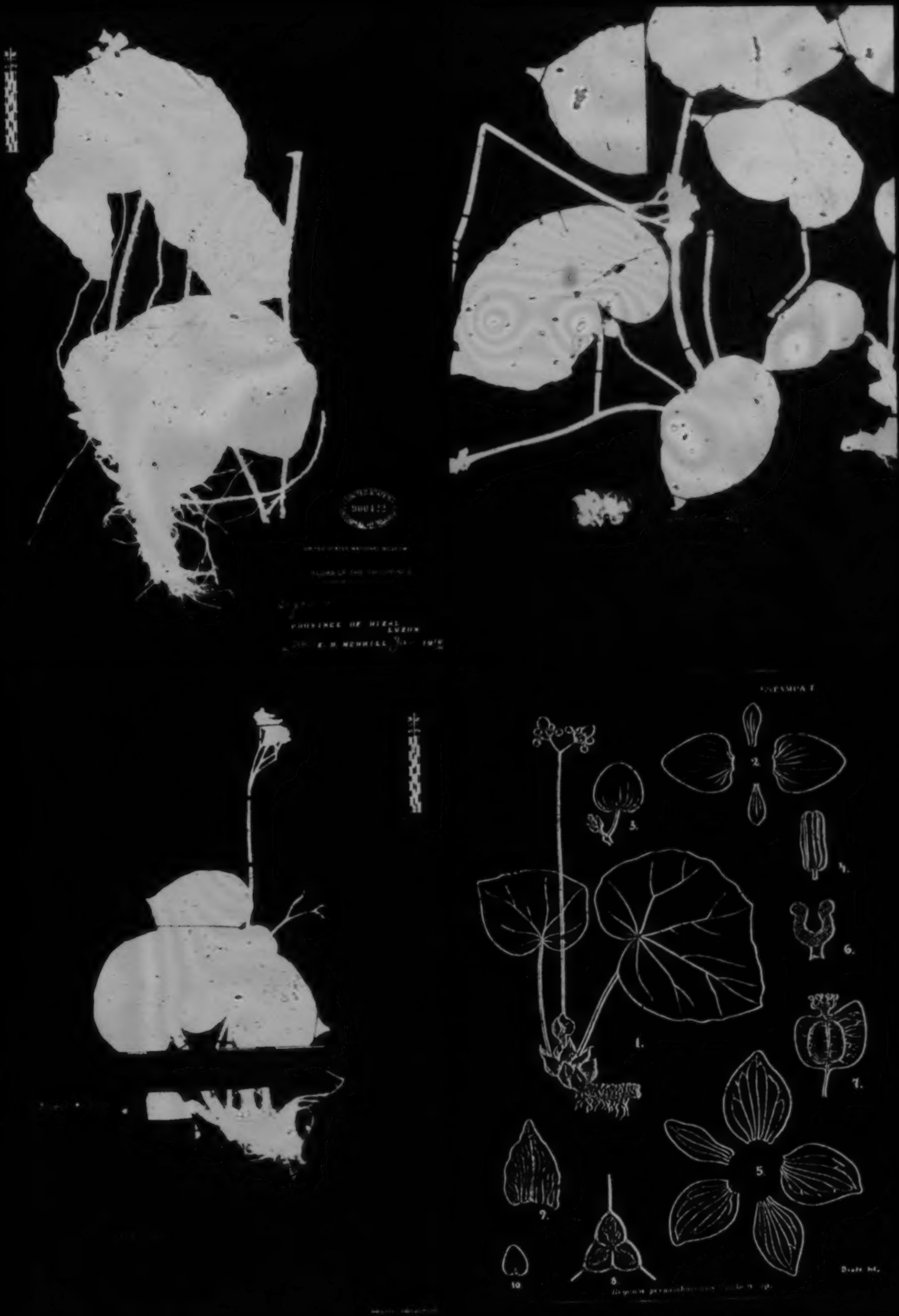
24.4, *B. ornithophylla*; 24.5, *B. maxwelliana*; 24.6, *B. labordei*; 24.7, *B. caespitosa*.



24.8, *B. pavonina;* 24.9, *B. dielsiana;* 24.10, *B. fenicis;* 24.11, *B. purdieana.*



24.12, *B. brevicyma*; 24.13, *B. schulziana*; 24.14, *B. davidsoniae*; 24.15, *B. mucronistipula.*


PROVINCE OF RIZAL
LUZON
E. D. MERRILL
1.
2.
3.
4.
5.
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7.
8.
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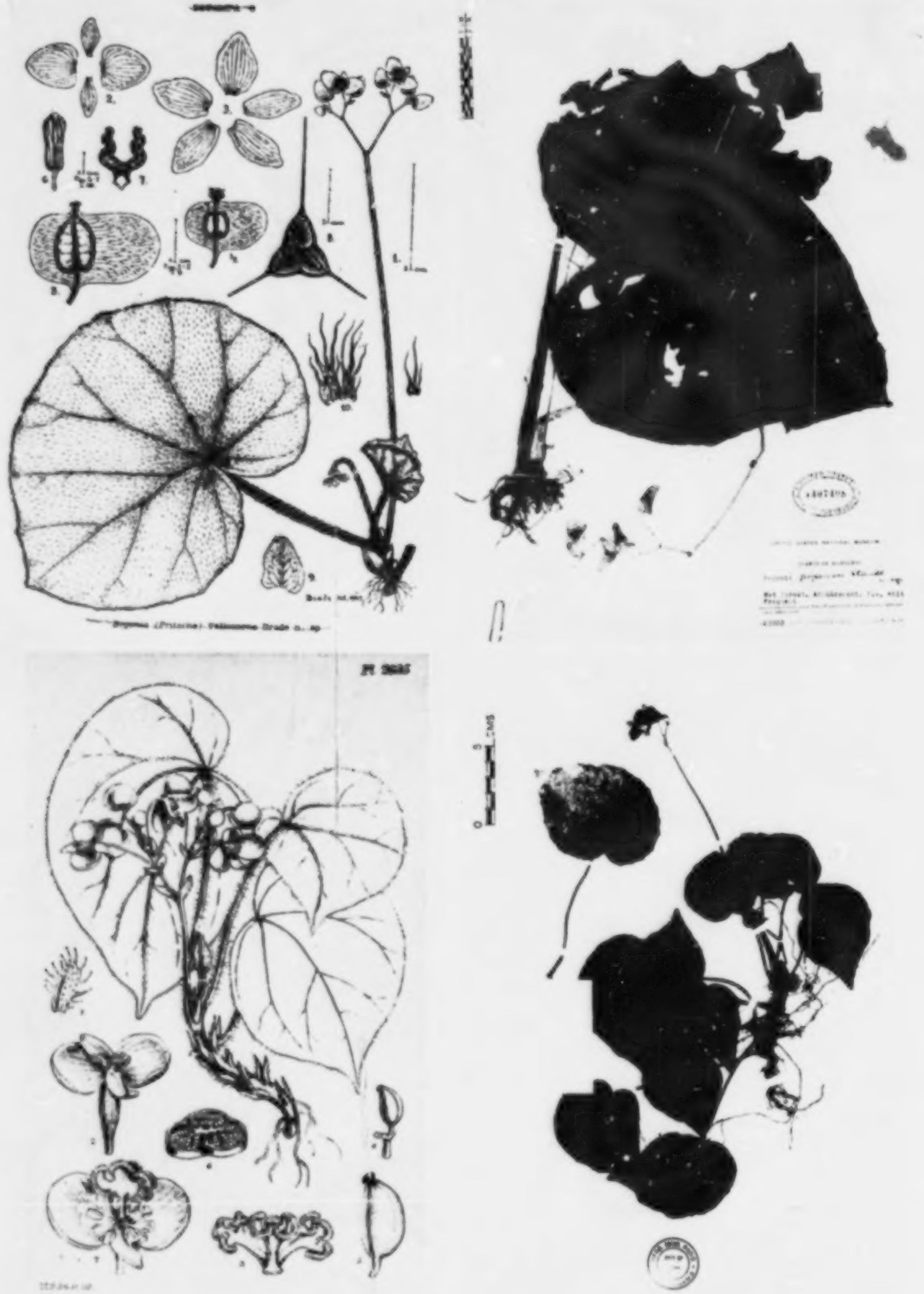
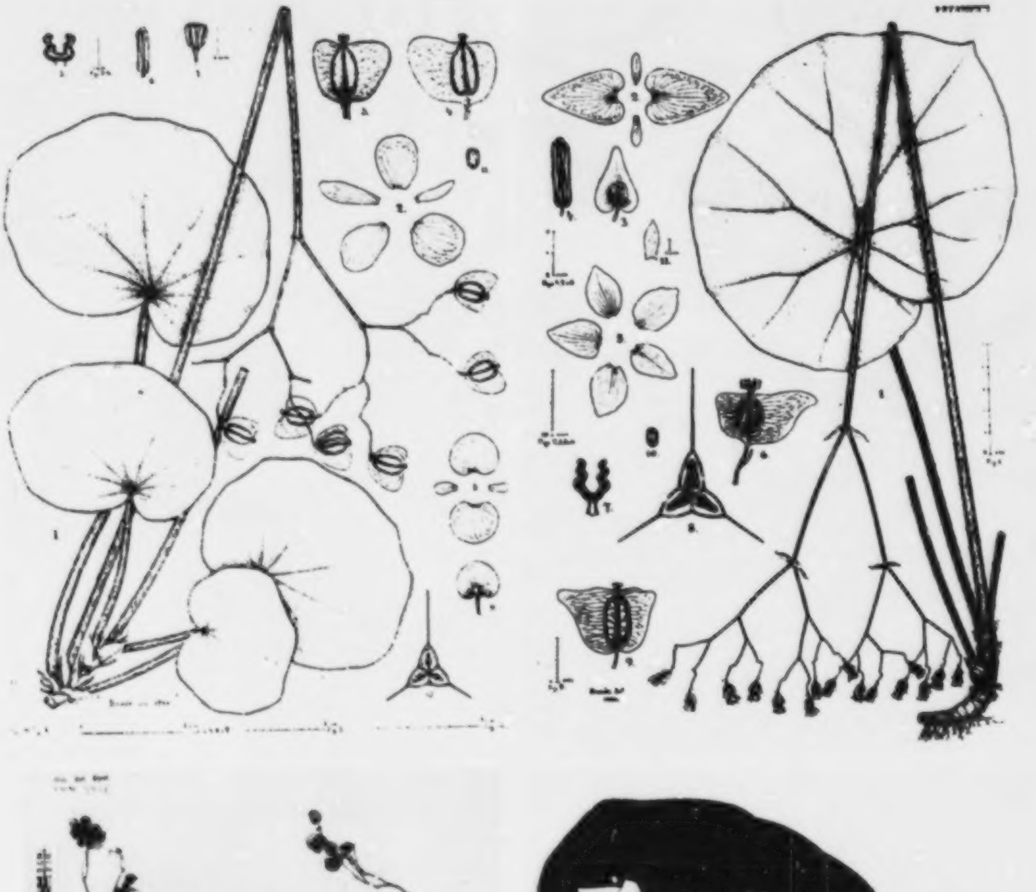
10.

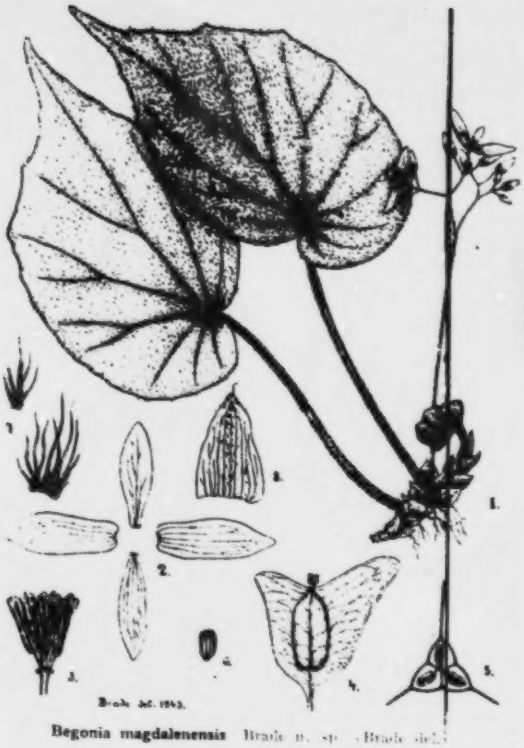
24.16, *B. calcicola*; 24.17, *B. hilariana*; 24.18, *B. squamipes*; 24.19, *B. pernambucensis*.



24.20, *B. olsoniae*; 24.21, *B. popenoei*; 24.22, *B. leprosa*; 24.23, *B. bonii.*



24.24, *B. fluminensis;* 24.25, *B. friburgensis;* 24.26, *B. longiscapa;* 24.27, *B. ramentacea.*


1.
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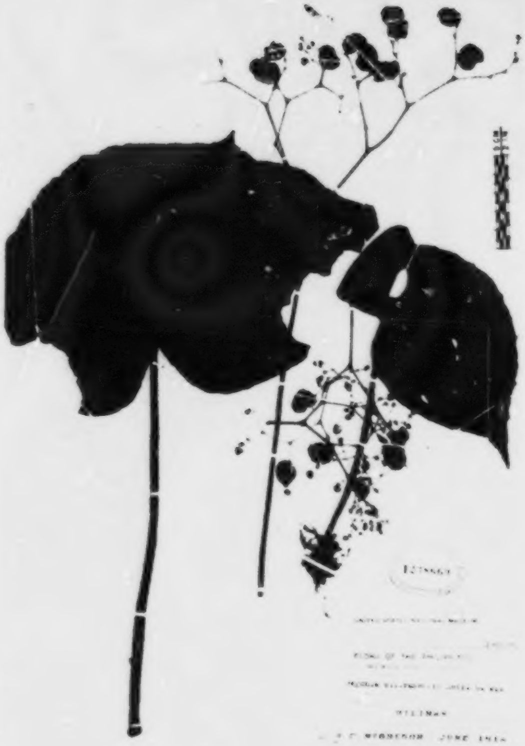
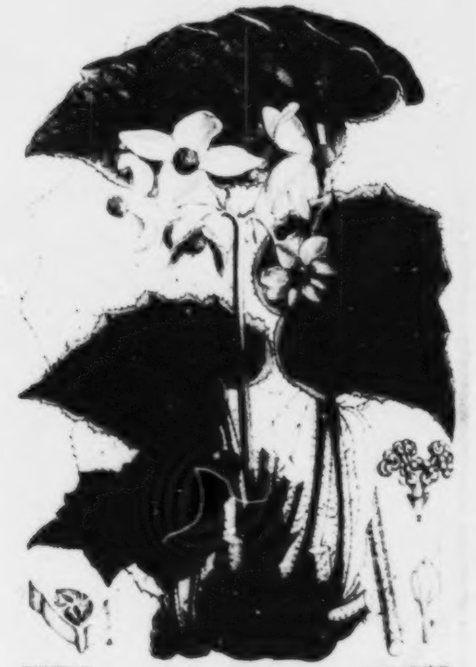
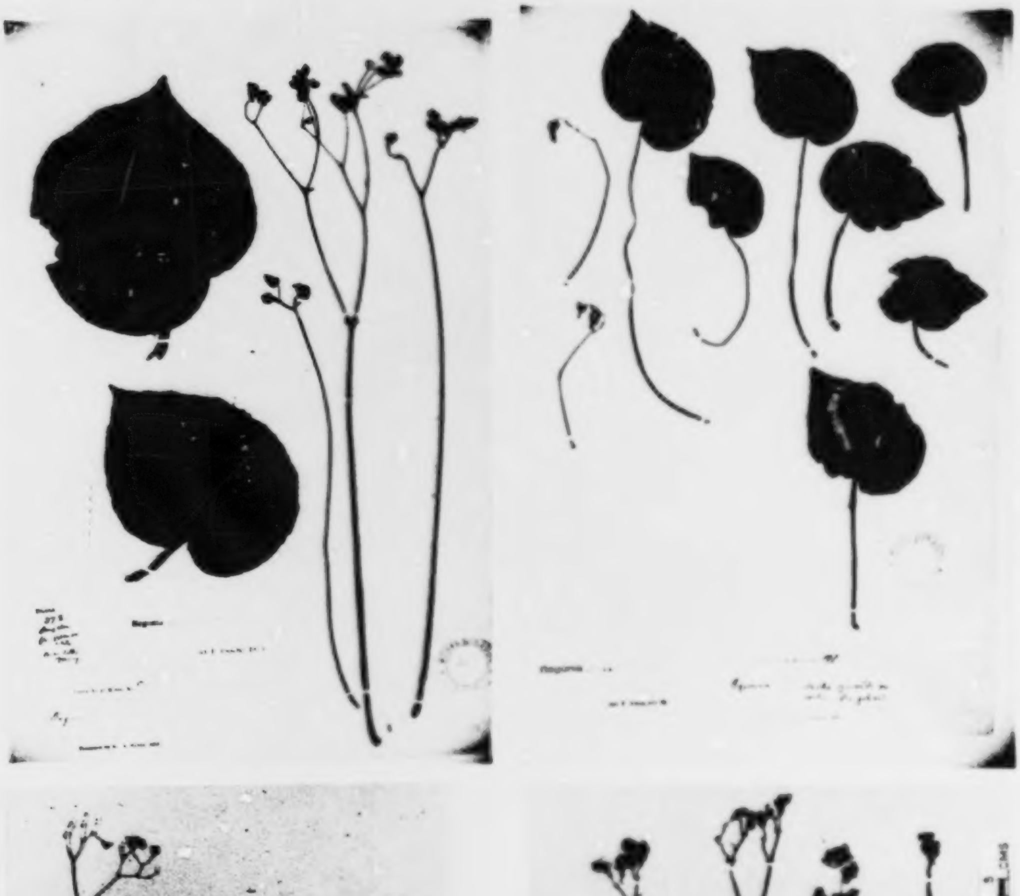
5.
Brade del. 1943.
Begonia magdalenensis Brade n. sp. (Brade del.)

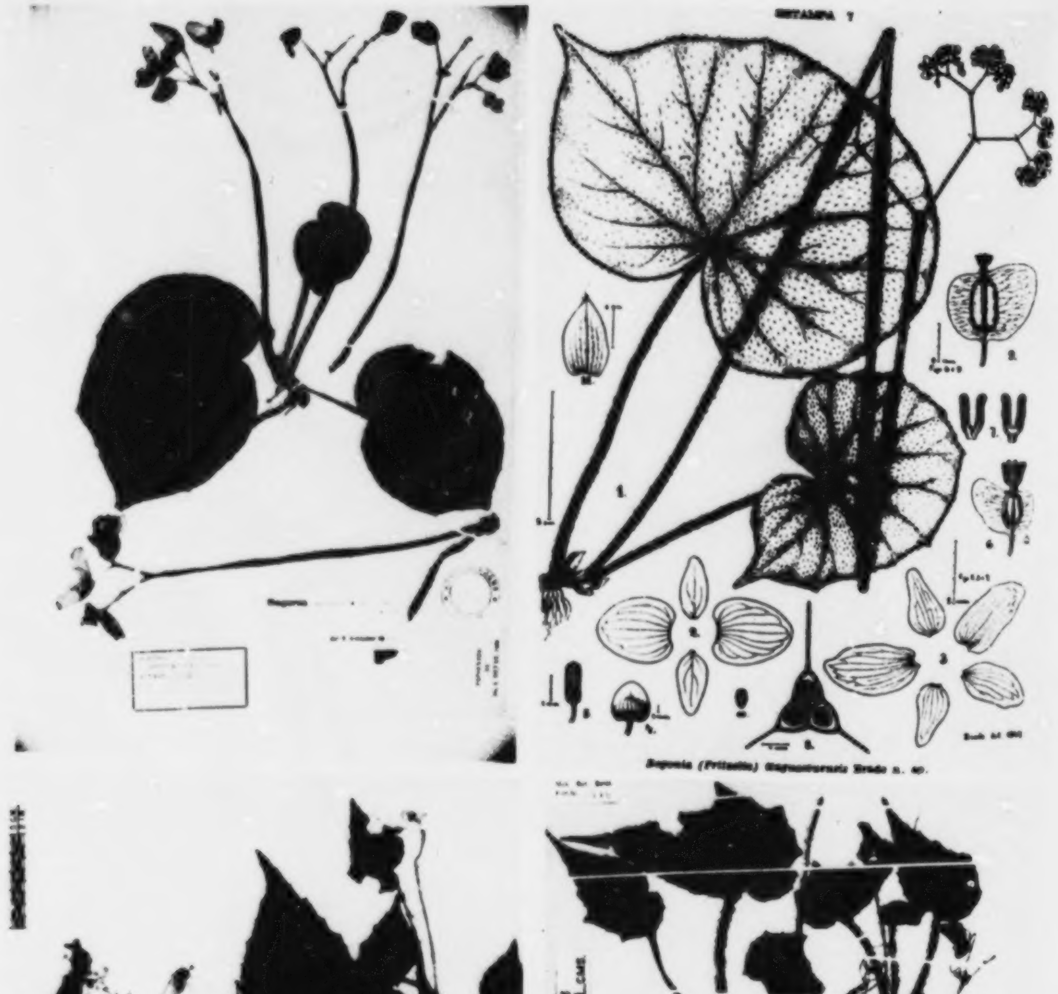




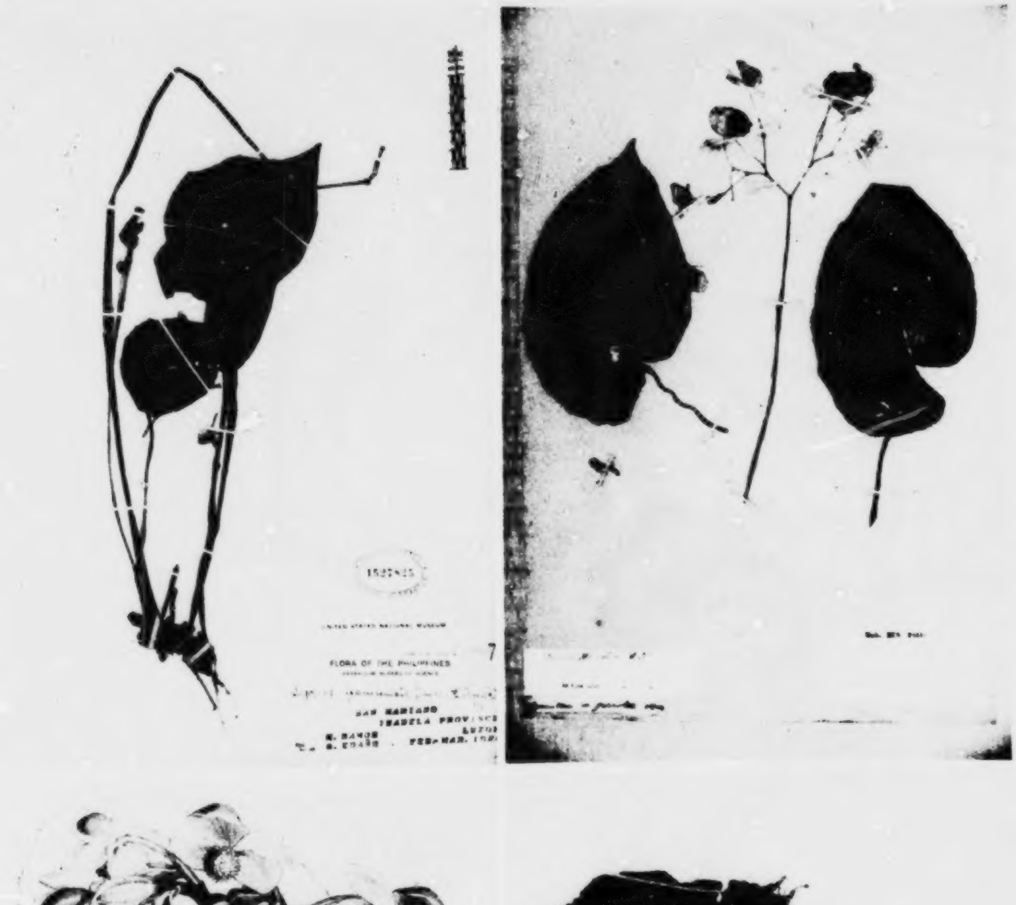
24.28, *B. magdalenensis;* 24.29, *B. biliranensis;* 24.30, *B. beddomei;* 24.31, *B. neglecta.*



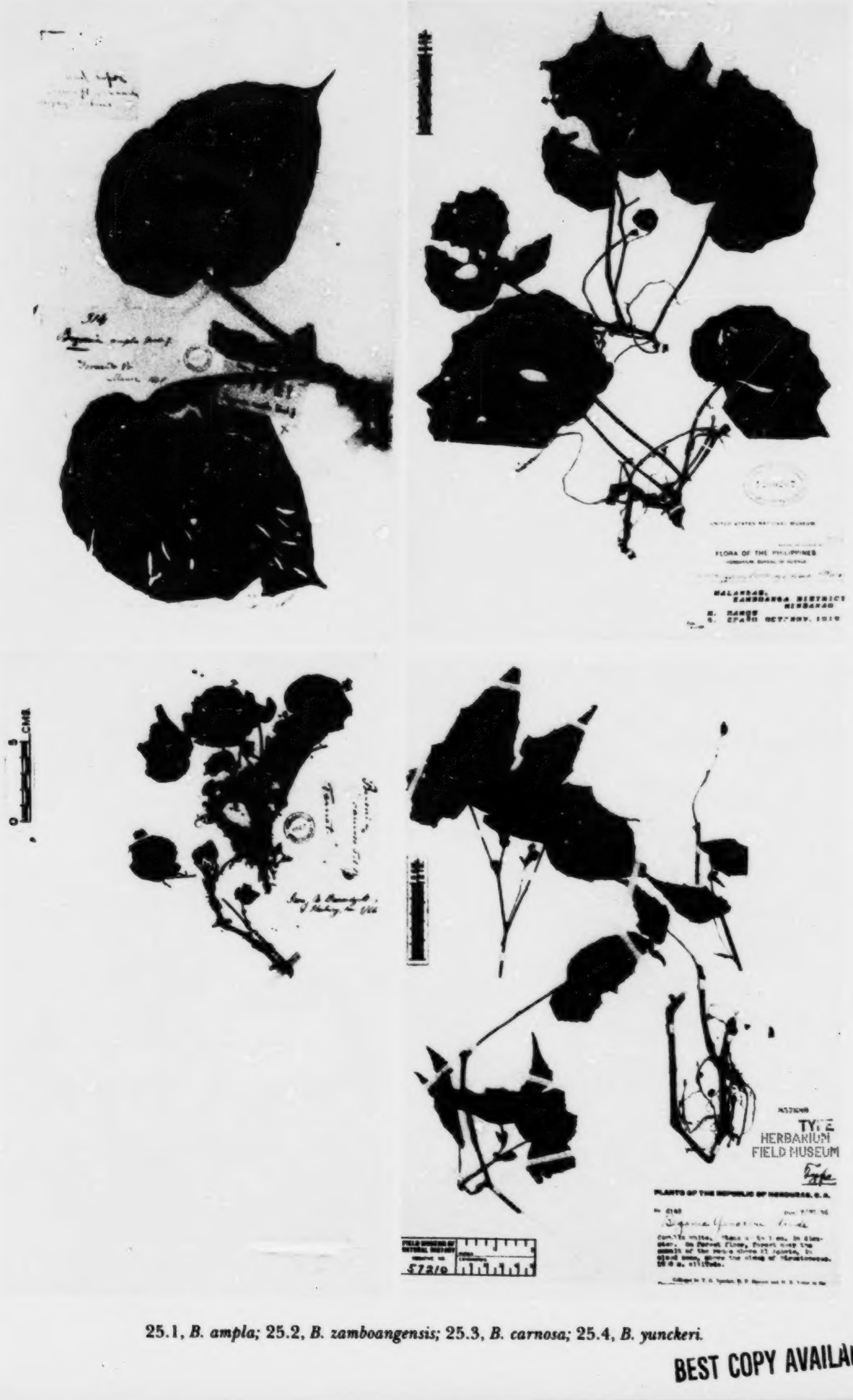
24.32, *B. filiformis;* 24.33, *B. morsei;* 24.34, *B. saxifraga;* 24.35, *B. tonkinensis.*


ESTAMPA 7
Begonia (Pritzelia) itaguassuensis Brade n. sp.
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
FLORA OF THE PHILIPPINES

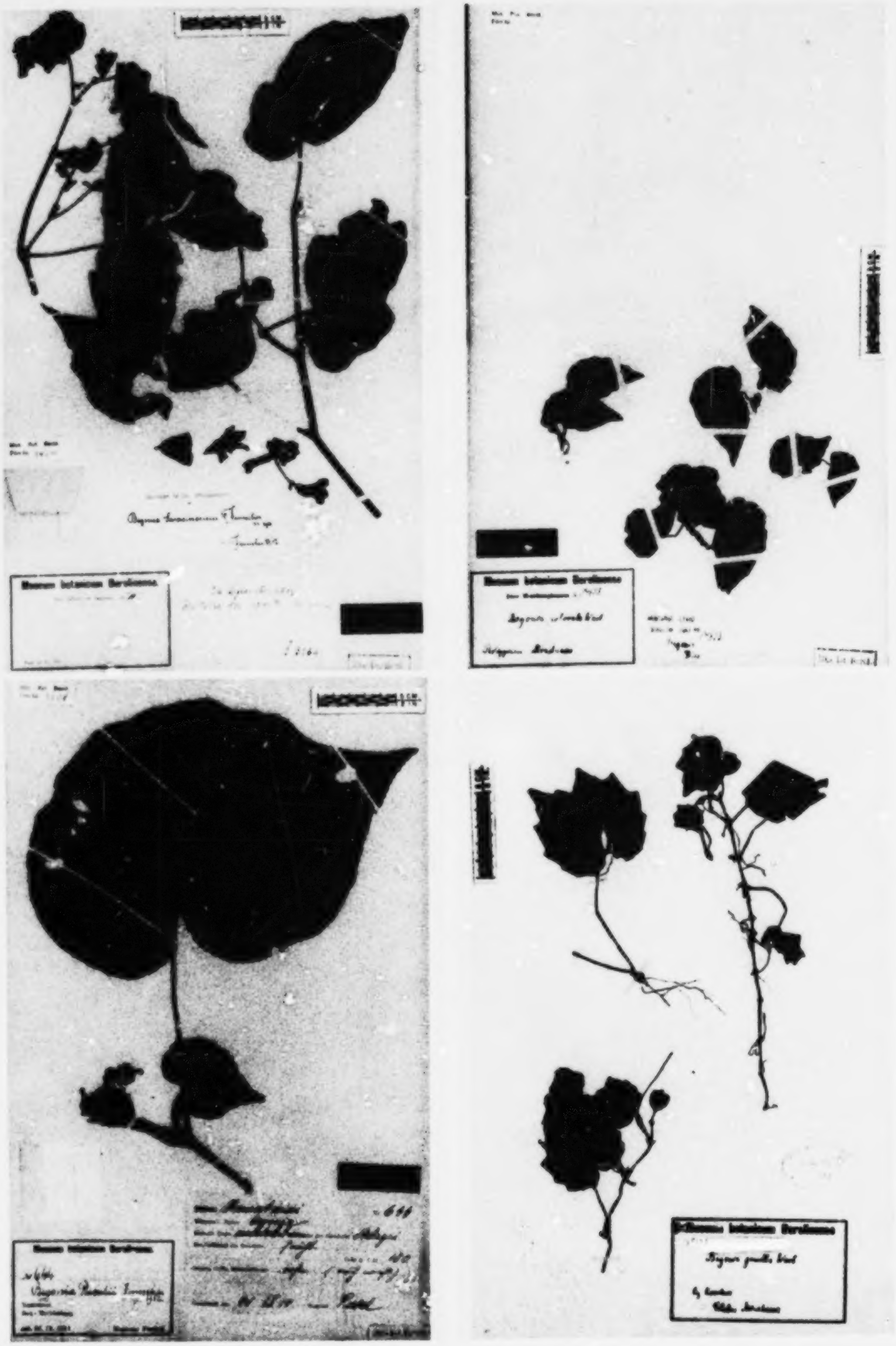
24.36, *B. setifolia;* 24.37, *B. itaguassuensis;* 24.38. *B. klemmei;* 24.39, *B. vanoverberghii.*


UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
SAN MARIANO
ISABELA PROVINCE
LUZON
PLANTS OF SOUTH AMERICA

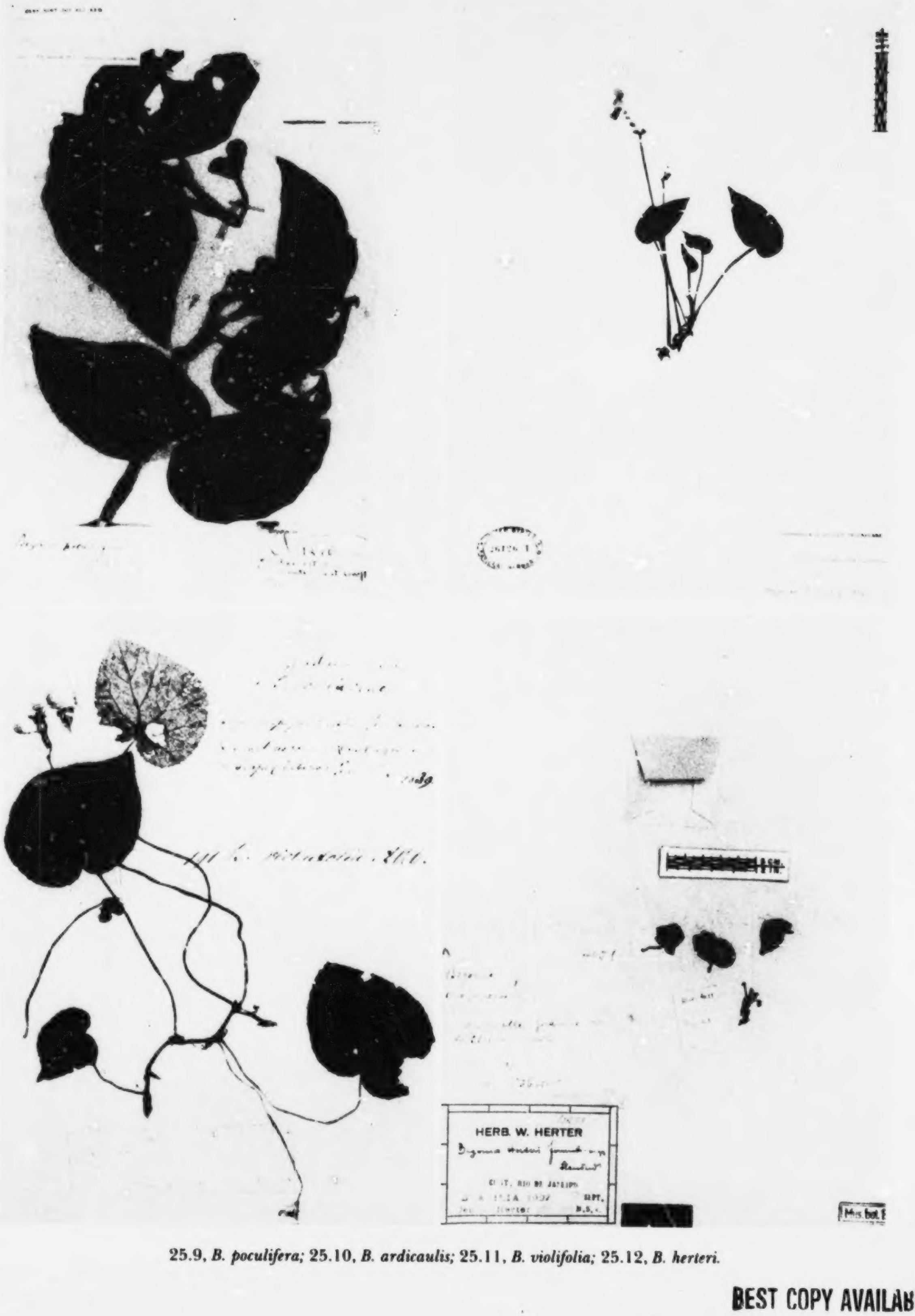
24.40, *B. isabelensis;* 24.41, *B. manillensis;* 24.42, *B. xanthina;* 24.43, *B. tumbezensis.*


UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
MALANGAS, ZAMBOANGA DISTRICT MINDANAO
0 5 CMS
TYPE
HERBARIUM
FIELD MUSEUM
PLANTS OF THE REPUBLIC OF HONDURAS, C.A.
572/0

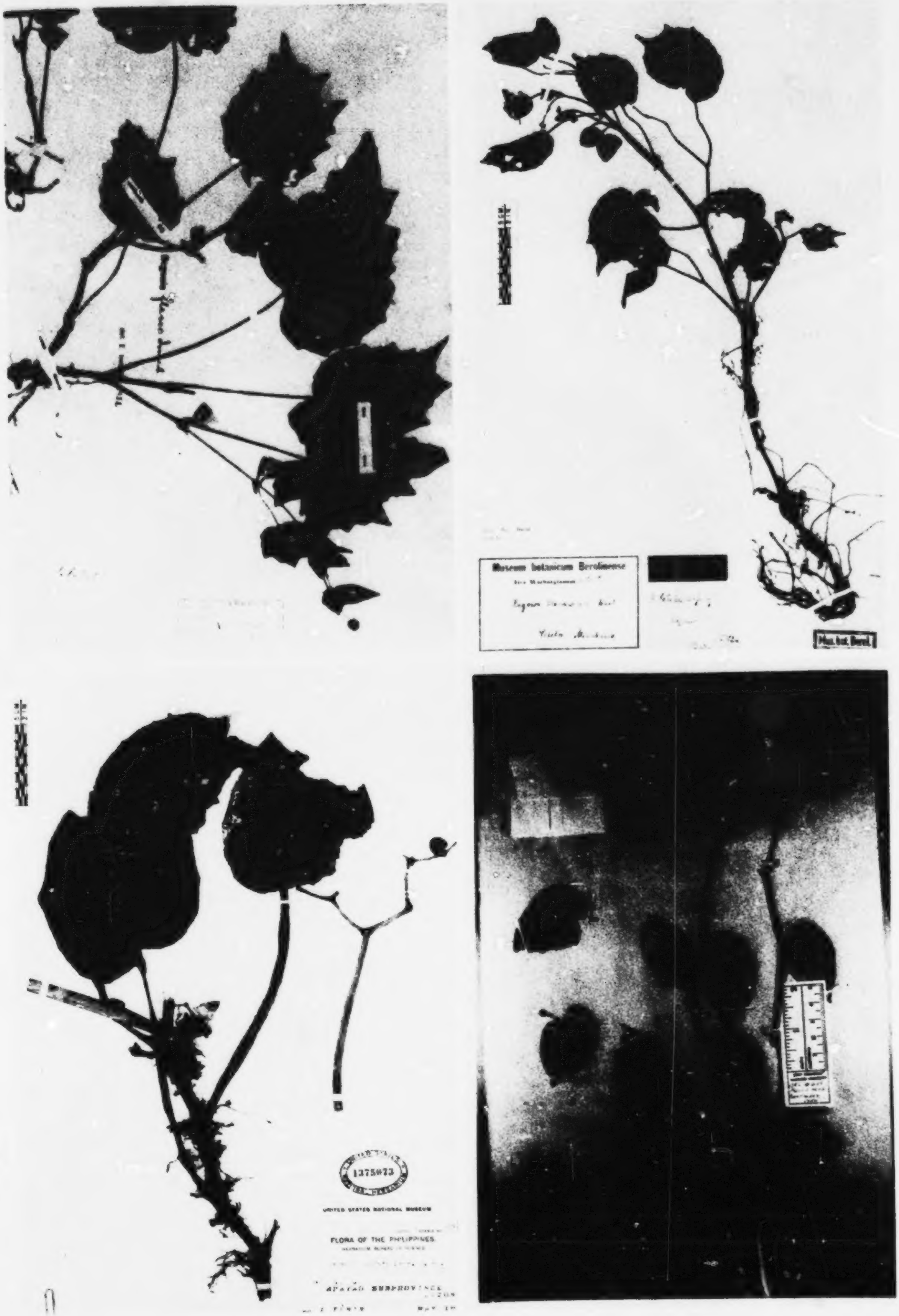
25.1, *B. ampla;* 25.2, *B. zamboangensis;* 25.3, *B. carnosa;* 25.4, *B. yunckeri.*



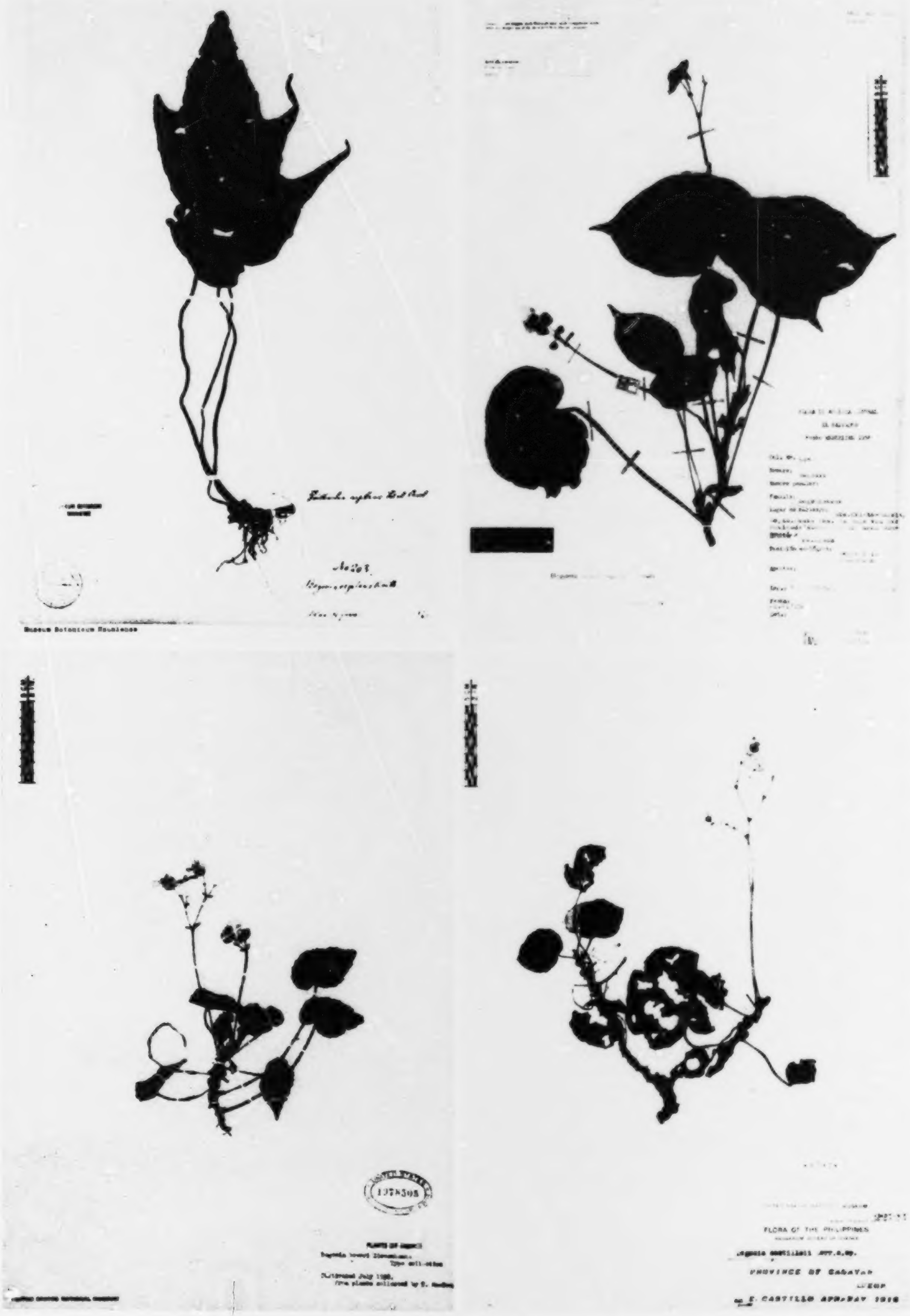
25.5, *B. sarasinorum;* 25.6, *B. colorata;* 25.7, *B. peekelii;* 25.8, *B. gemella.*


HERB. W. HERTER

25.9, *B. poculifera;* 25.10, *B. ardicaulis;* 25.11, *B. violifolia;* 25.12, *B. herteri.*


Museum botanicum Berolinense
Mus. bot. Berol.
1375873
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
APAYAO SUBPROVINCE
LUZON

25.13, *B. flacca;* 25.14, *B. strachwitzii;* 25.15, *B. caudata;* 25.16, *B. denticulata.*


FLORA OF THE PHILIPPINES

25.17, *B. ludicra;* 25.18, *B. assurgens;* 25.19, *B. bowerae;* 25.20, *B. castilloi.*

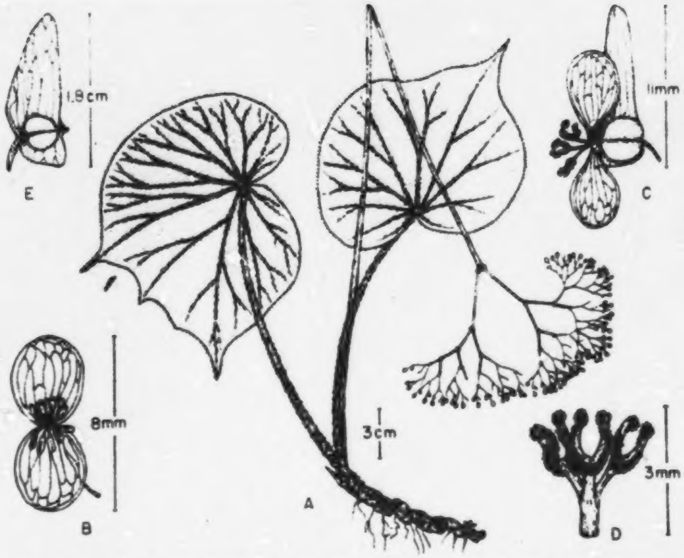
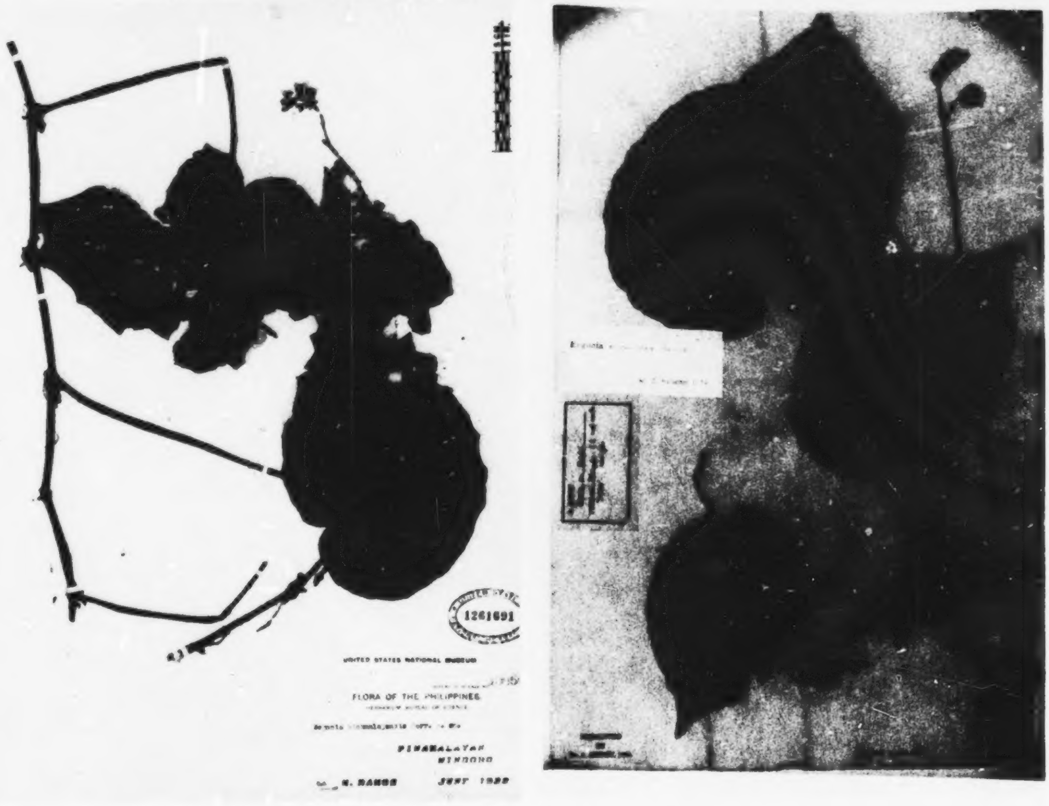
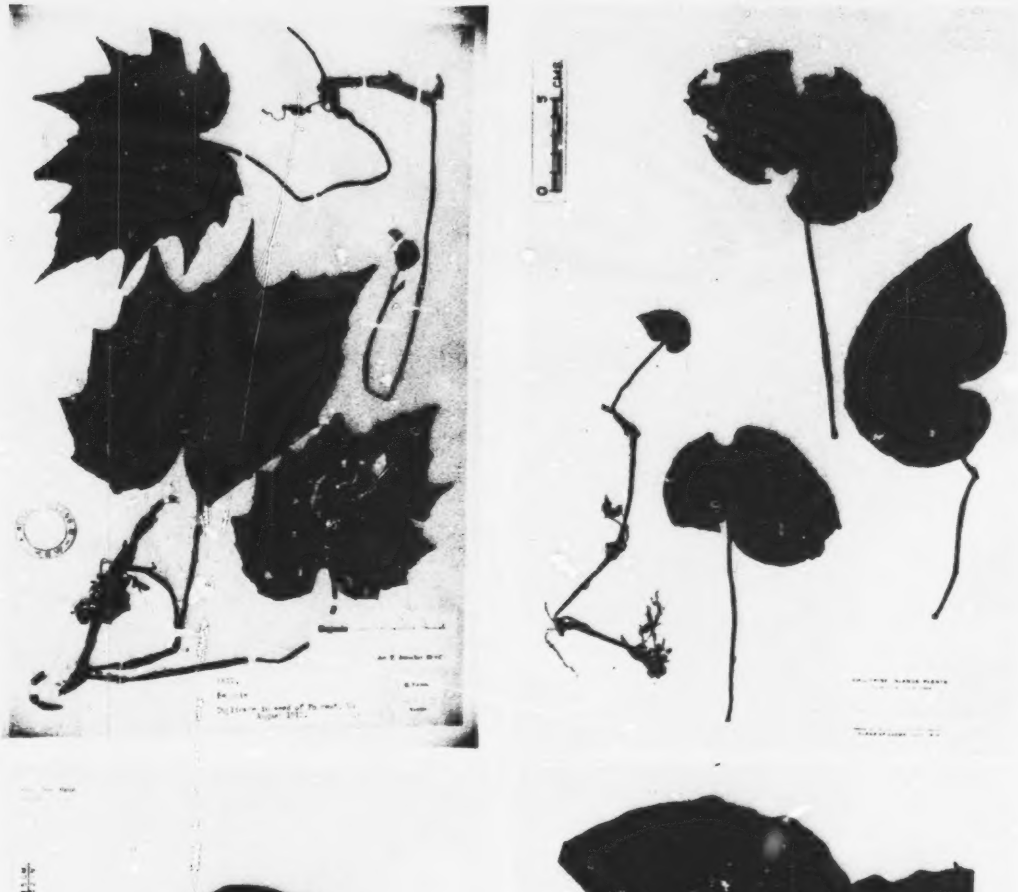

1.8cm
E
1mm
C
8mm
B
3cm
A
3mm
D

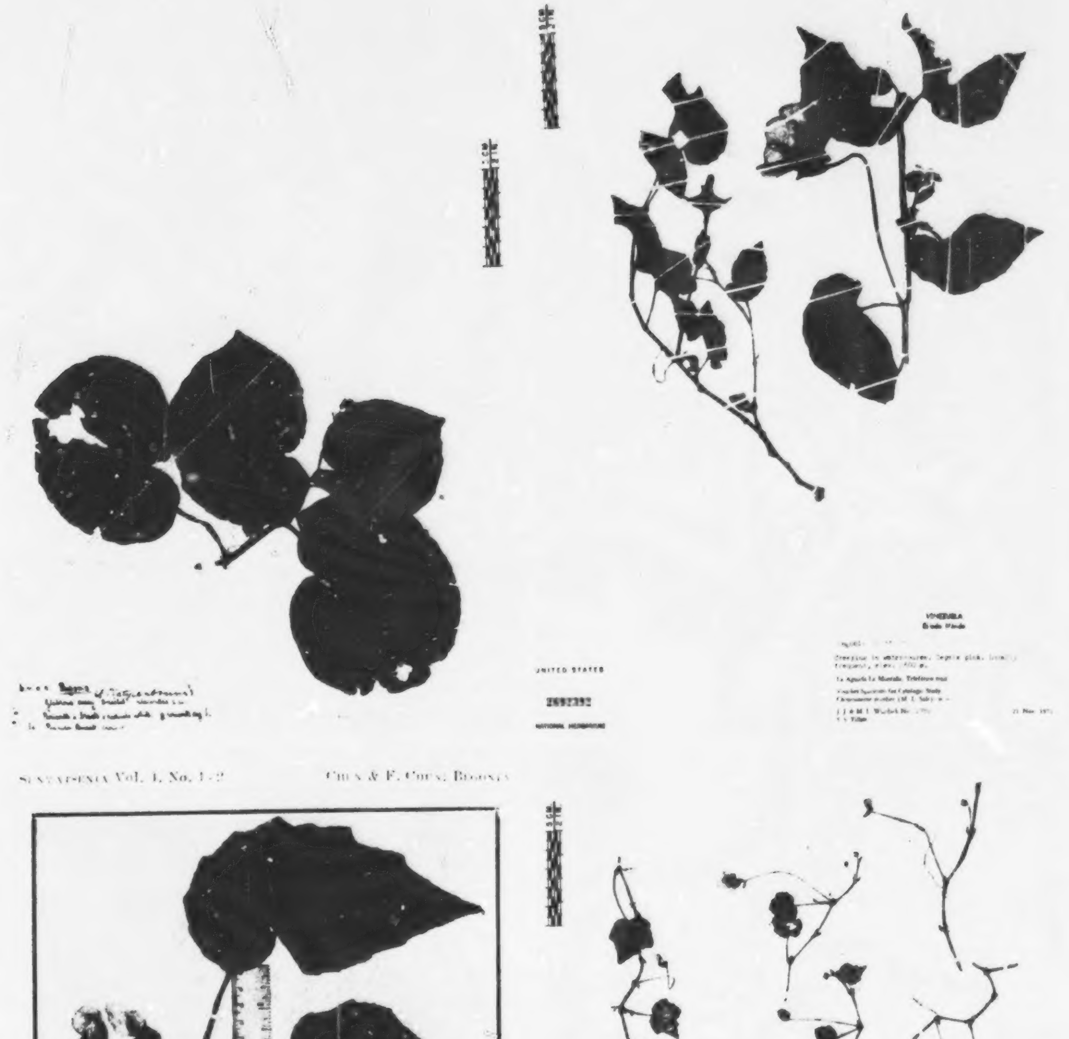
FIG. 5. *Begonia croatii* Burt-Utley. A. Habit. B. Staminate flower. C. Pistillate flower. D. Styles [illegible]


1261691
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
PINAMALAYAN
MINDORO

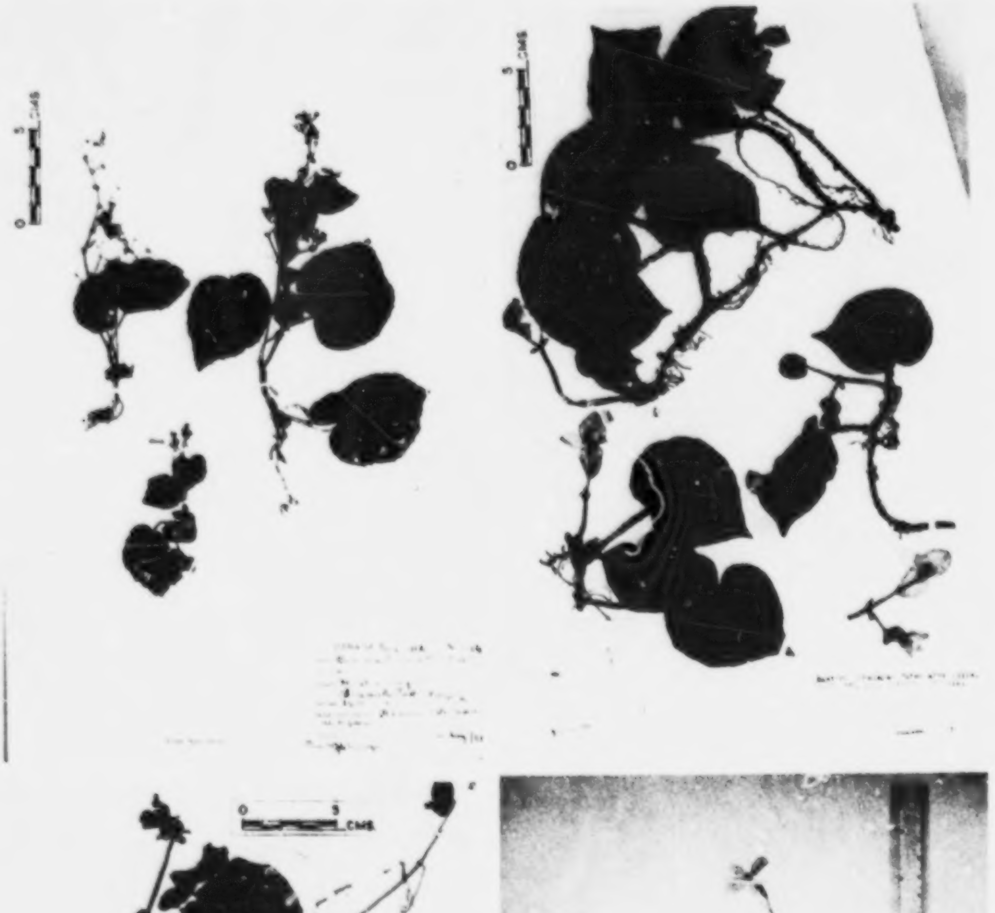
25.22 (top), *B. croatii;* 25.21, *B. pinamalayensis;* 25.23, *B. versicolor.*



25.24, *B. repenticaulis;* 26.1, *B. neopurpurea;* 26.2, *B. subcyclophylla;* 26.3, *B. lecomtei.*


UNITED STATES
NATIONAL HERBARIUM
VENEZUELA
SUNYATSENIA Vol. 4, No. 1-2
CHUN & F. CHUN: BEGONIA
Plate 9.— BEGONIA HANDELII Irmscher
1283117
UNITED STATES NATIONAL MUSEUM
FLORA OF THE PHILIPPINES
ANTIQUE PROVINCE
PANAY

26.4, *B. havilandii;* 26.5, *B. mariae;* 26.6, *B. handelii;* 26.7, *B. serpens.*


0
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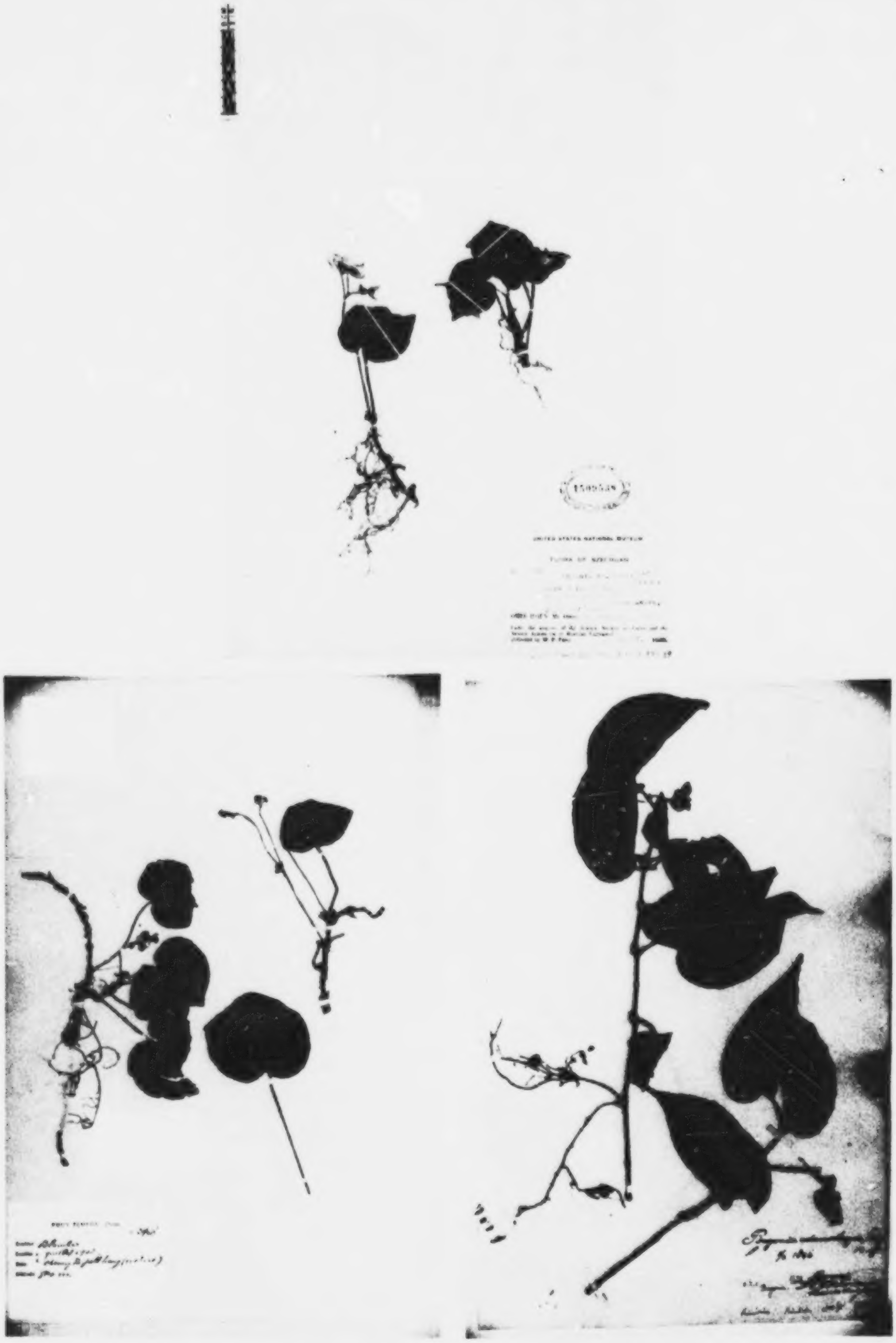
26.8, *B. wengeri;* 26.9, *B. scintillans;* 26.10, *B. forrestii;* 26.11, *B. itatiaiensis.*



26.12, *B. limprichtii;* 26.13, *B. porteri;* 26.14, *B. adenostegia.*

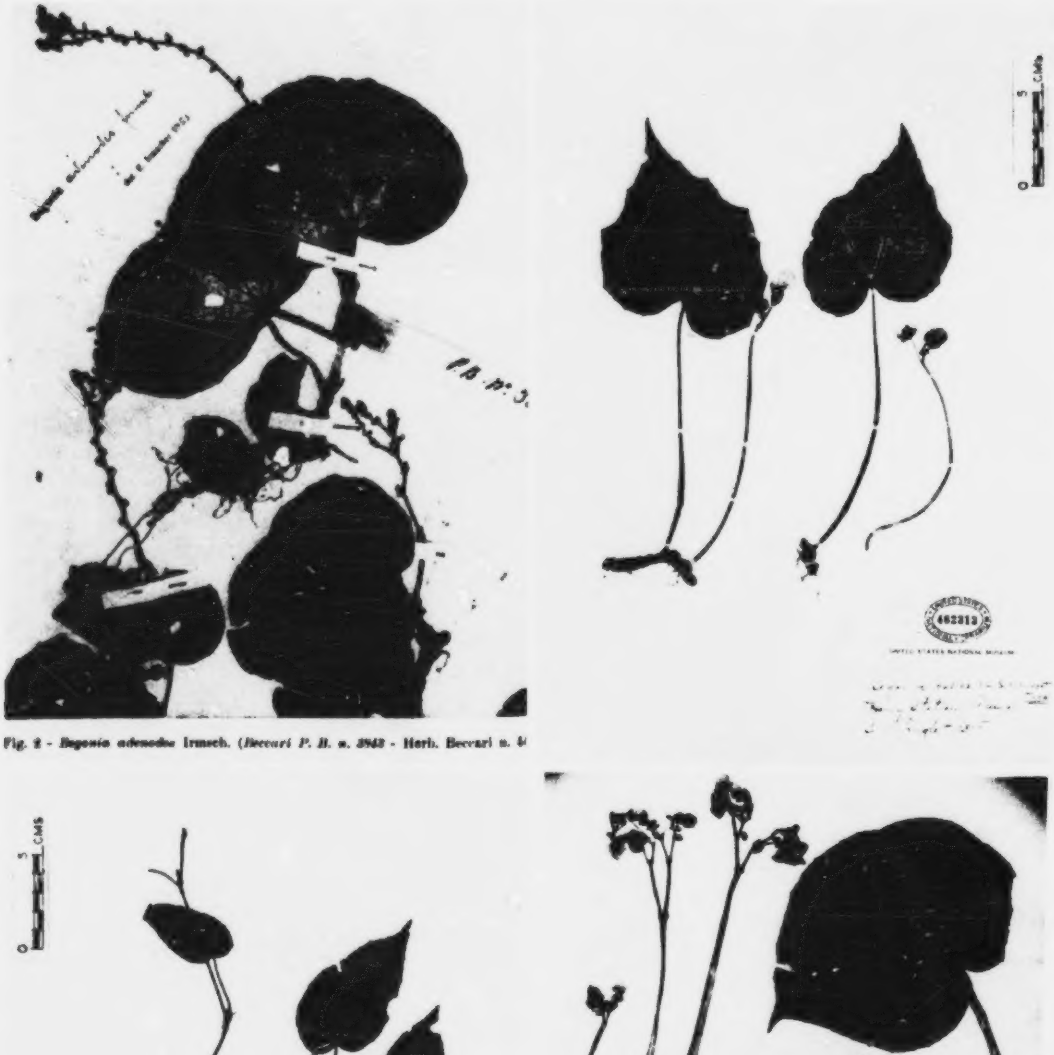


Fig. 2 - Begonia adenodes Irmsch. (Beccari P. B. n. 3943 - Herb. Beccari n. 4
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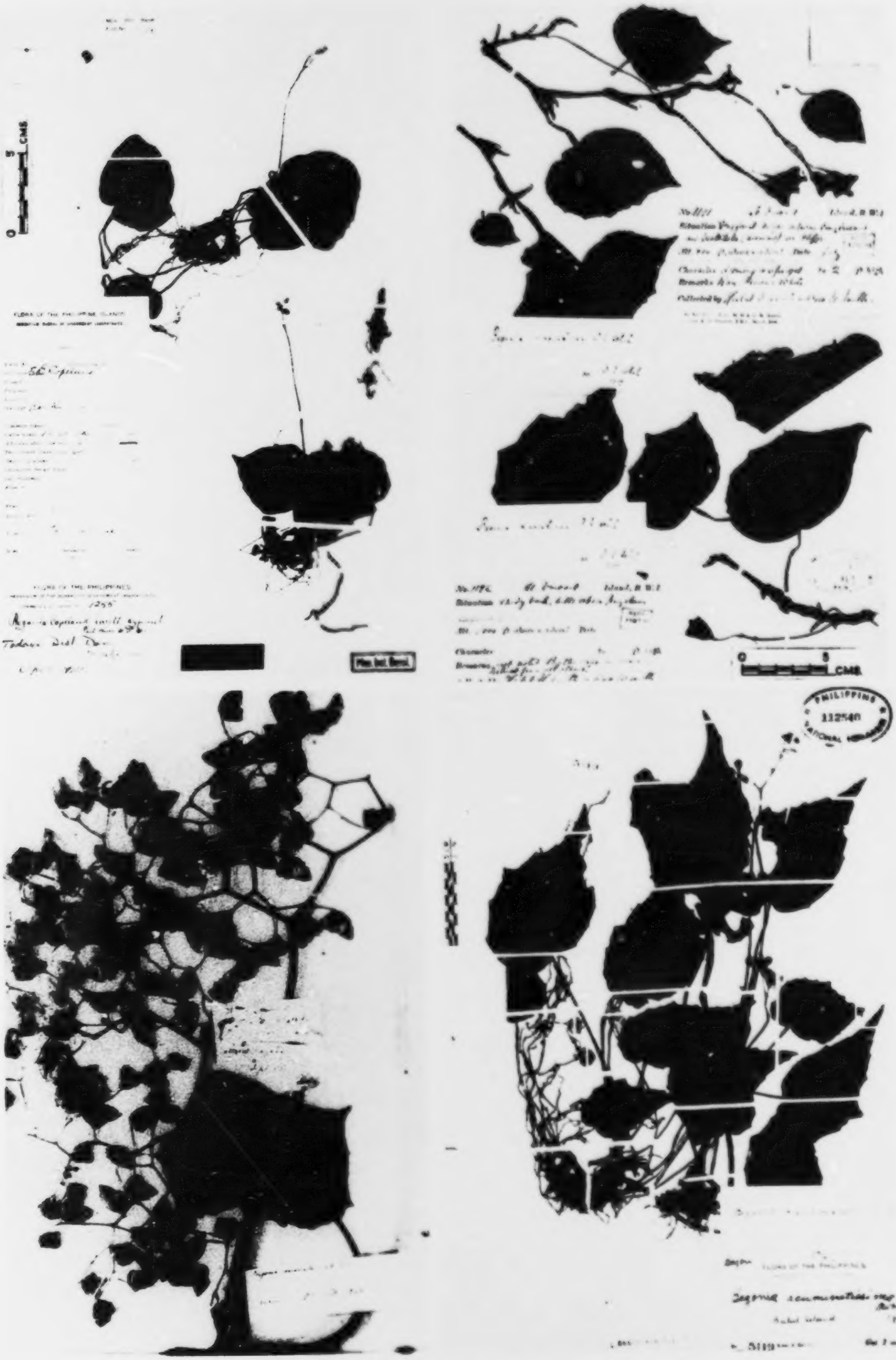
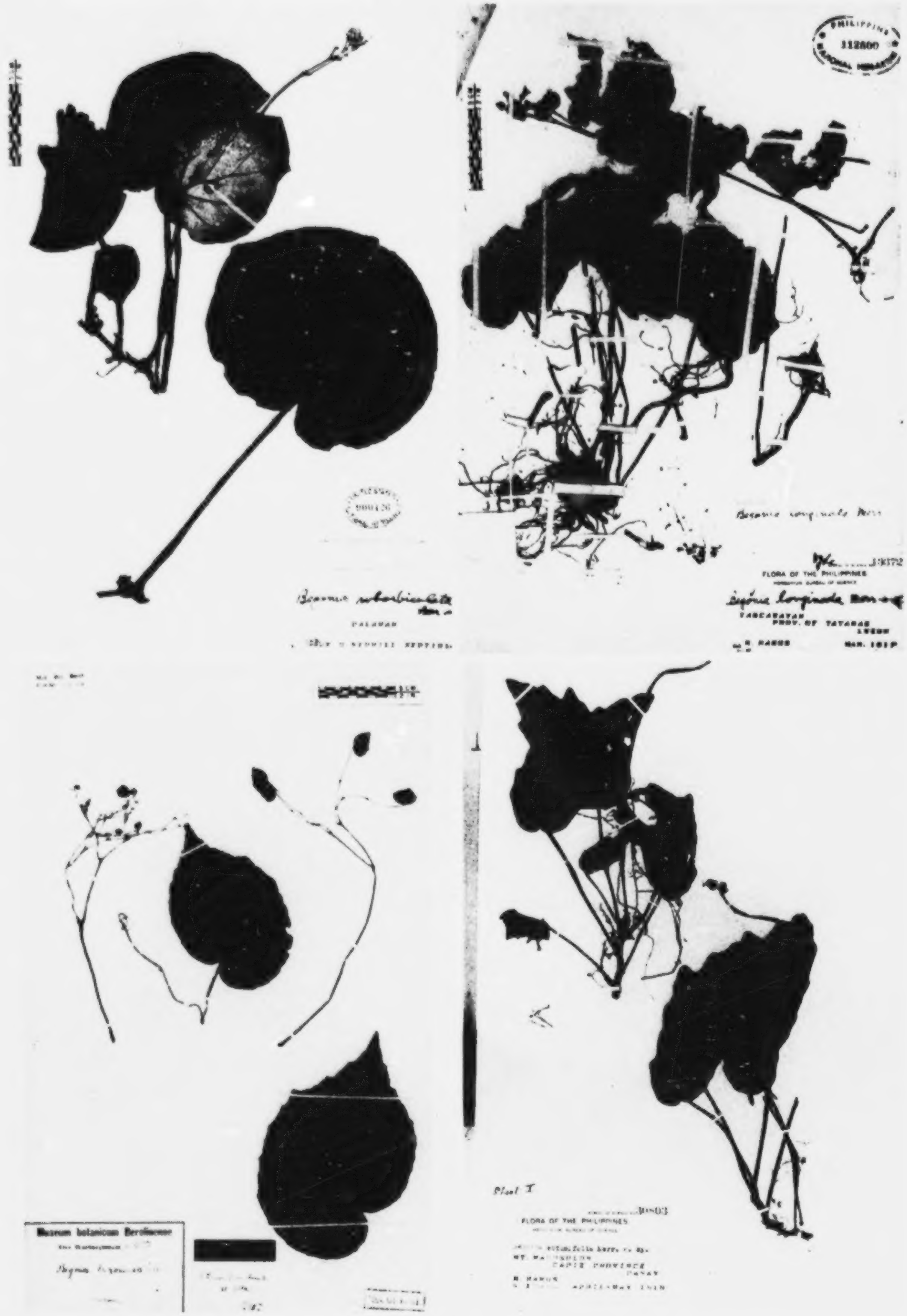
CMS
462313
UNITED STATES NATIONAL MUSEUM
1081659
UNITED STATES NATIONAL MUSEUM
Begonia

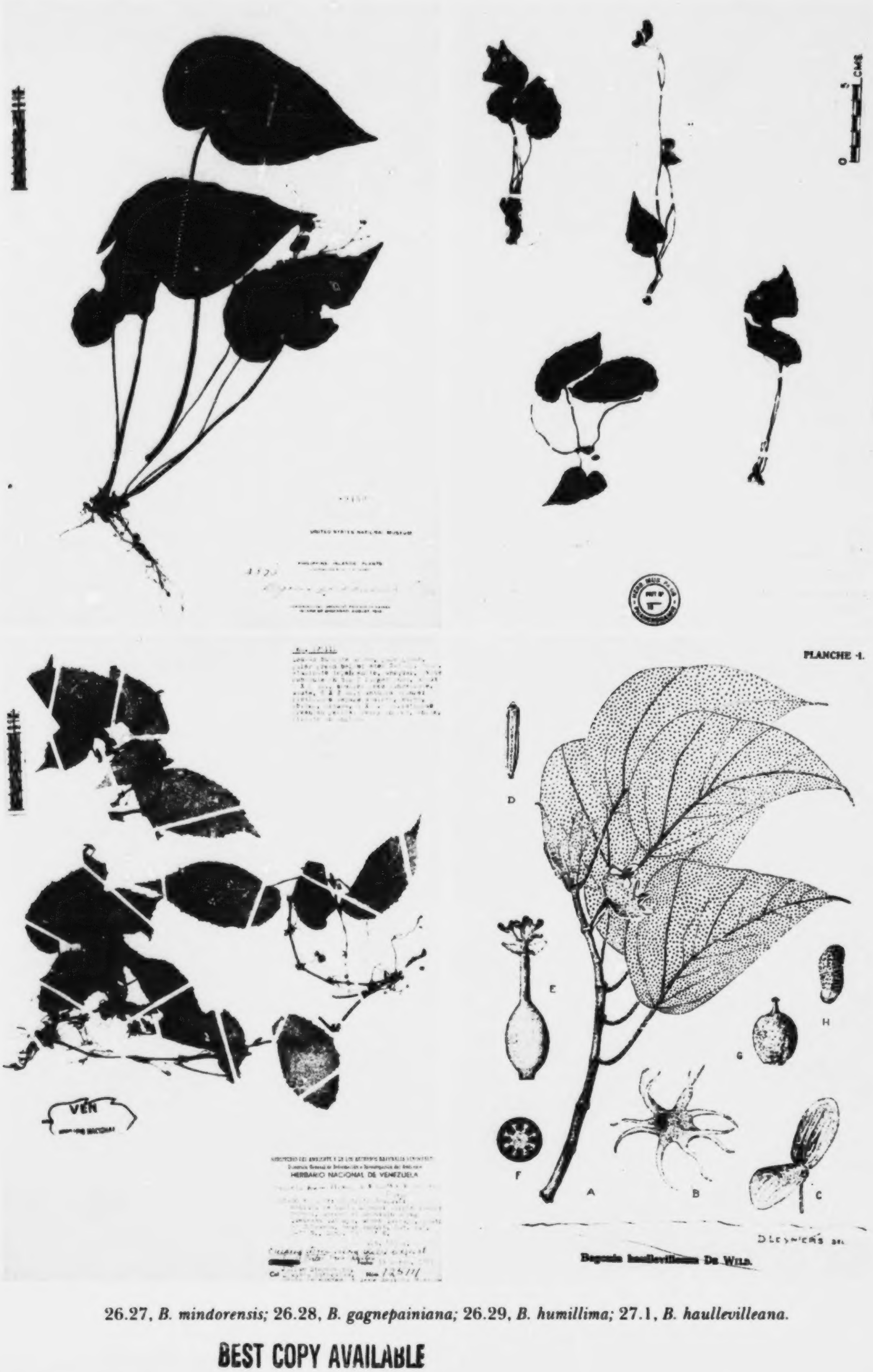
26.15, *B. adenodes;* 26.16, *B. pudica;* 26.17, *B. carletonii;* 26.18, *B. lanternaria.*



26.19, *B. copelandii*; 26.20, *B. vincentina*; 26.21, *B. convolvulacea*; 26.22, *B. acuminatissima*.


PHILIPPINES
112800
PALAWAN
FLORA OF THE PHILIPPINES
PROV. OF TAYABAS
LUZON
Museum botanicum Berolinense
Plant I
FLORA OF THE PHILIPPINES
CAPIZ PROVINCE
PANAY

26.23, *B. suborbiculata;* 26.24, *B. longinoda;* 26.25, *B. luzonensis;* 26.26, *B. obtusifolia.*


UNITED STATES NATIONAL MUSEUM
PHILIPPINE ISLANDS PLANTS
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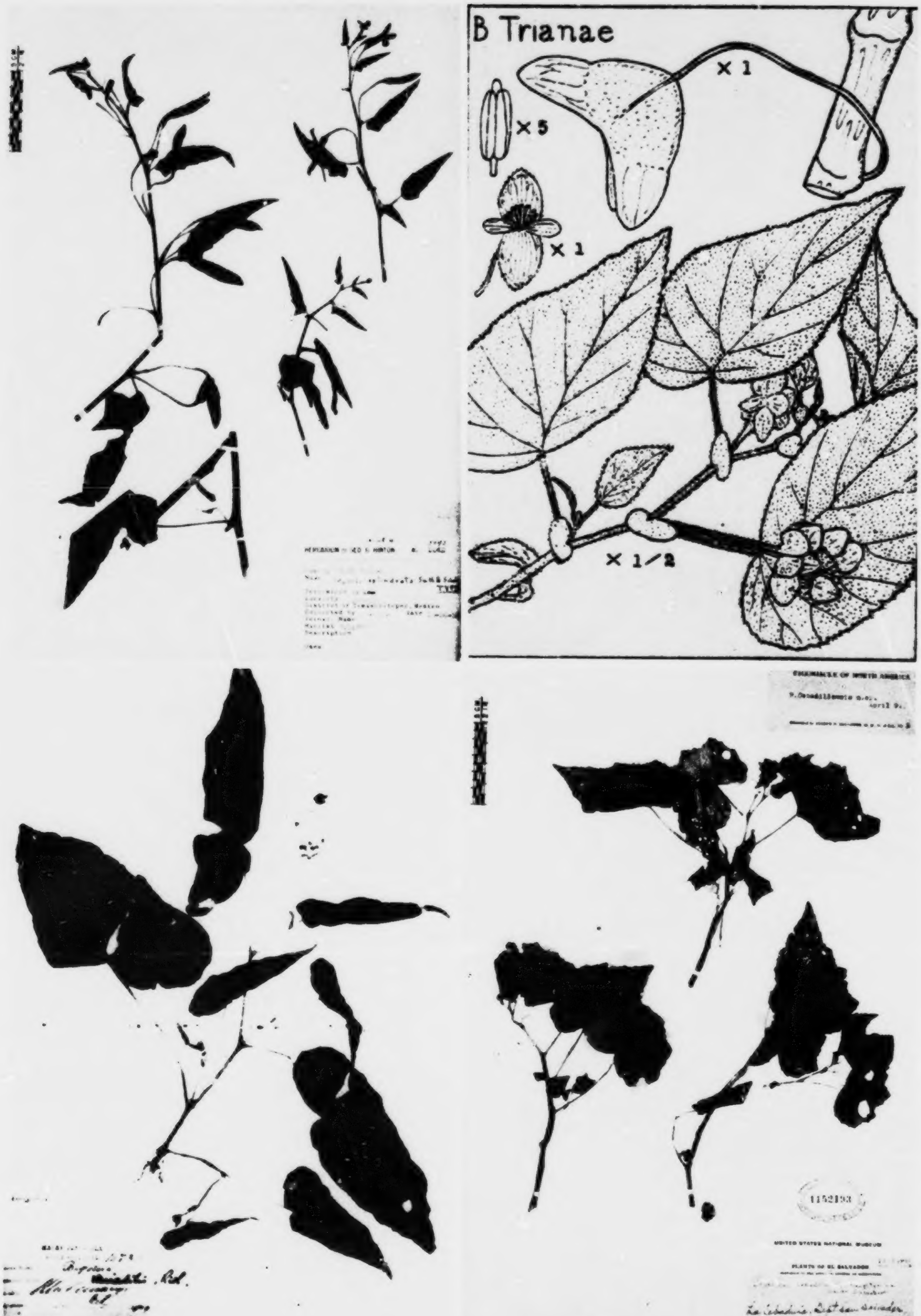
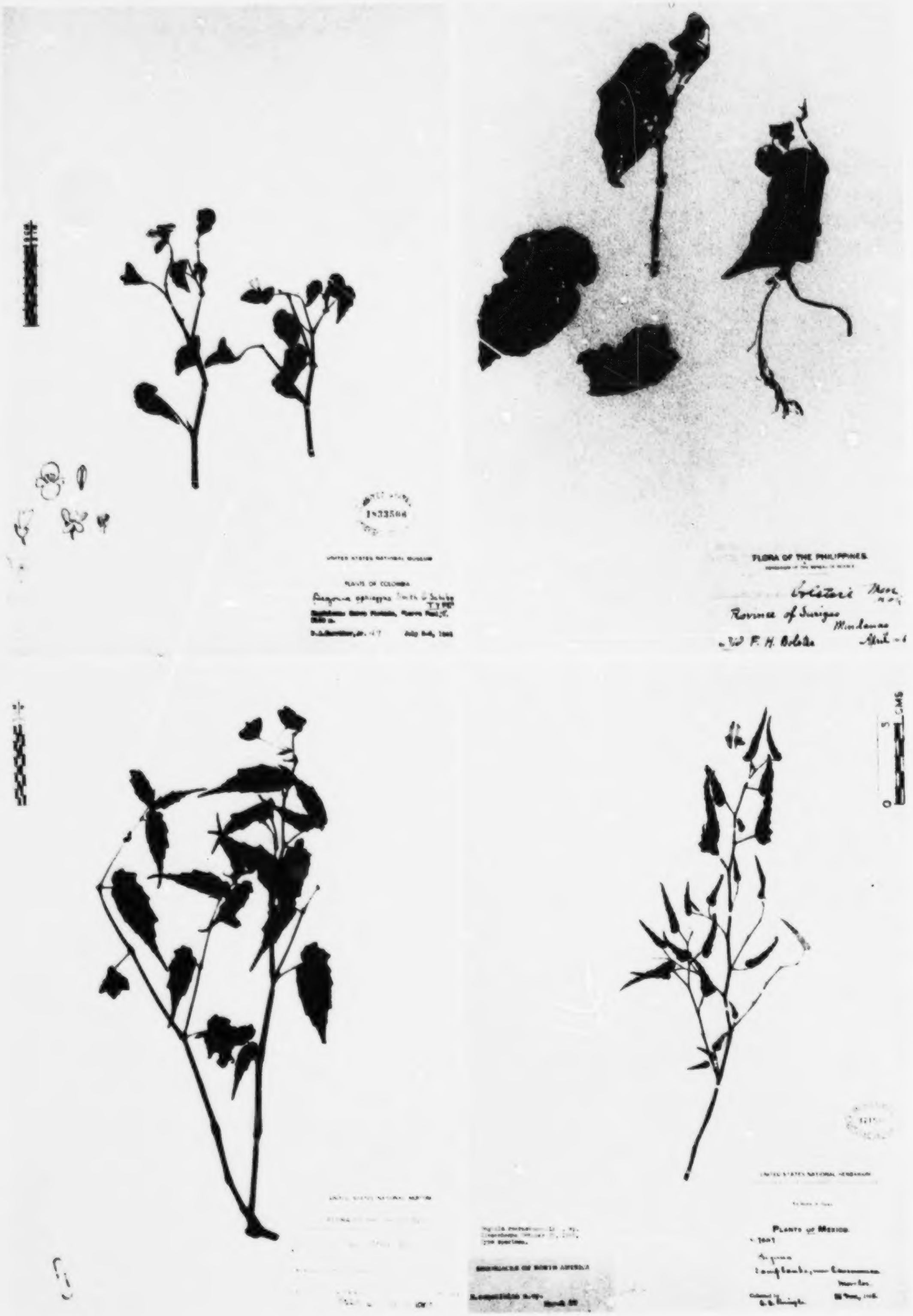
CMS
VEN
HERBARIO NACIONAL DE VENEZUELA
PLANCHE 4.
D
E
F
A
B
C
G
H
D. LESPIERS del.
Begonia haullevilleana De Wild.

26.27, *B. mindorensis;* 26.28, *B. gagnepainiana;* 26.29, *B. humillima;* 27.1, *B. haullevilleana.*


B Trianae
× 1
× 5
× 1
× 1/2
1152193

27.2, *B. cylindrata;* 27.3, *B. trianae;* 27.4, *B. variabilis;* 27.5, *B. cebadillensis*


UNITED STATES NATIONAL MUSEUM
PLANTS OF COLOMBIA
FLORA OF THE PHILIPPINES
bolsteri
Province of Surigao
Mindanao
F. H. Bolster
UNITED STATES NATIONAL HERBARIUM
PLANTS OF MEXICO
CMS
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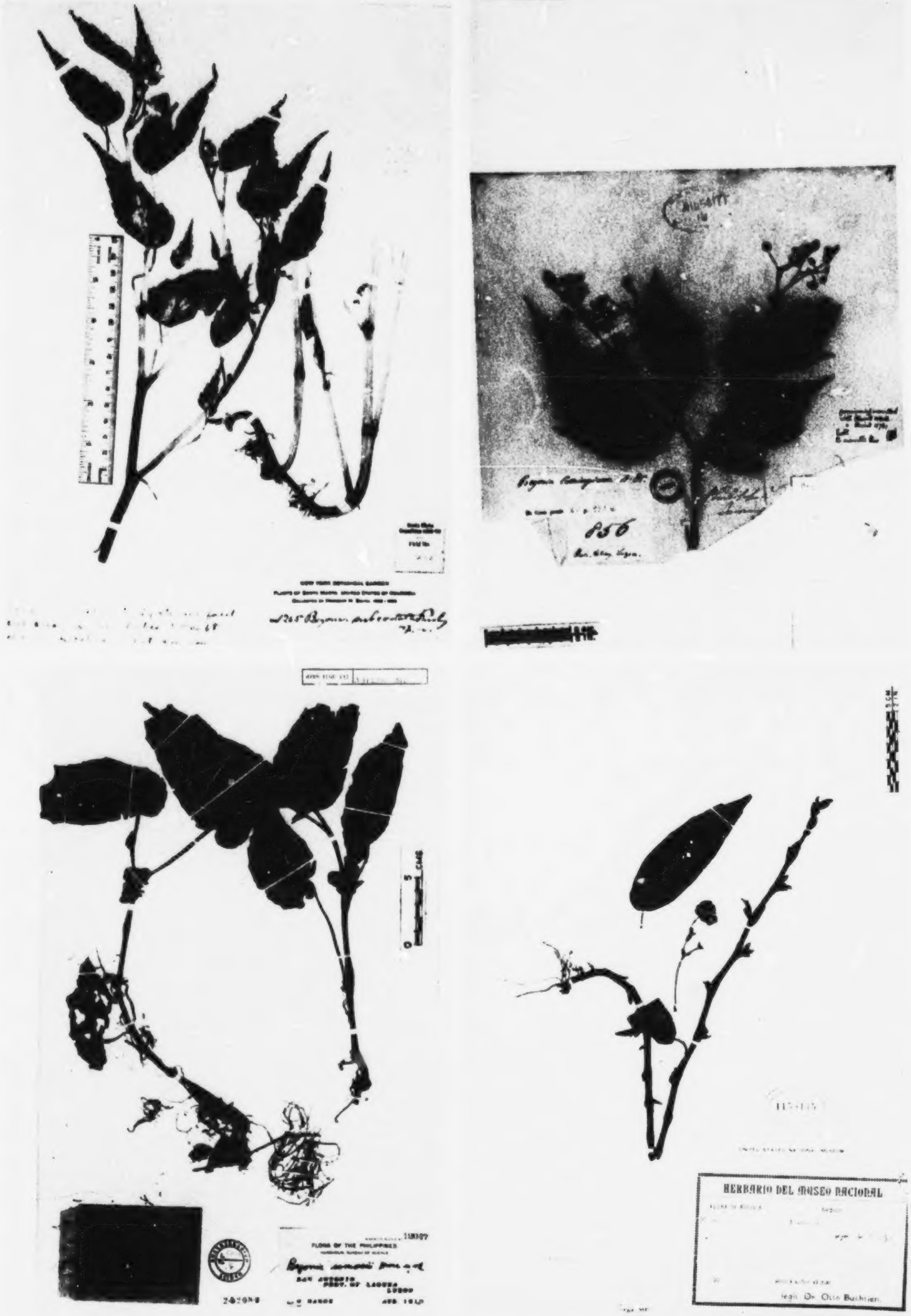
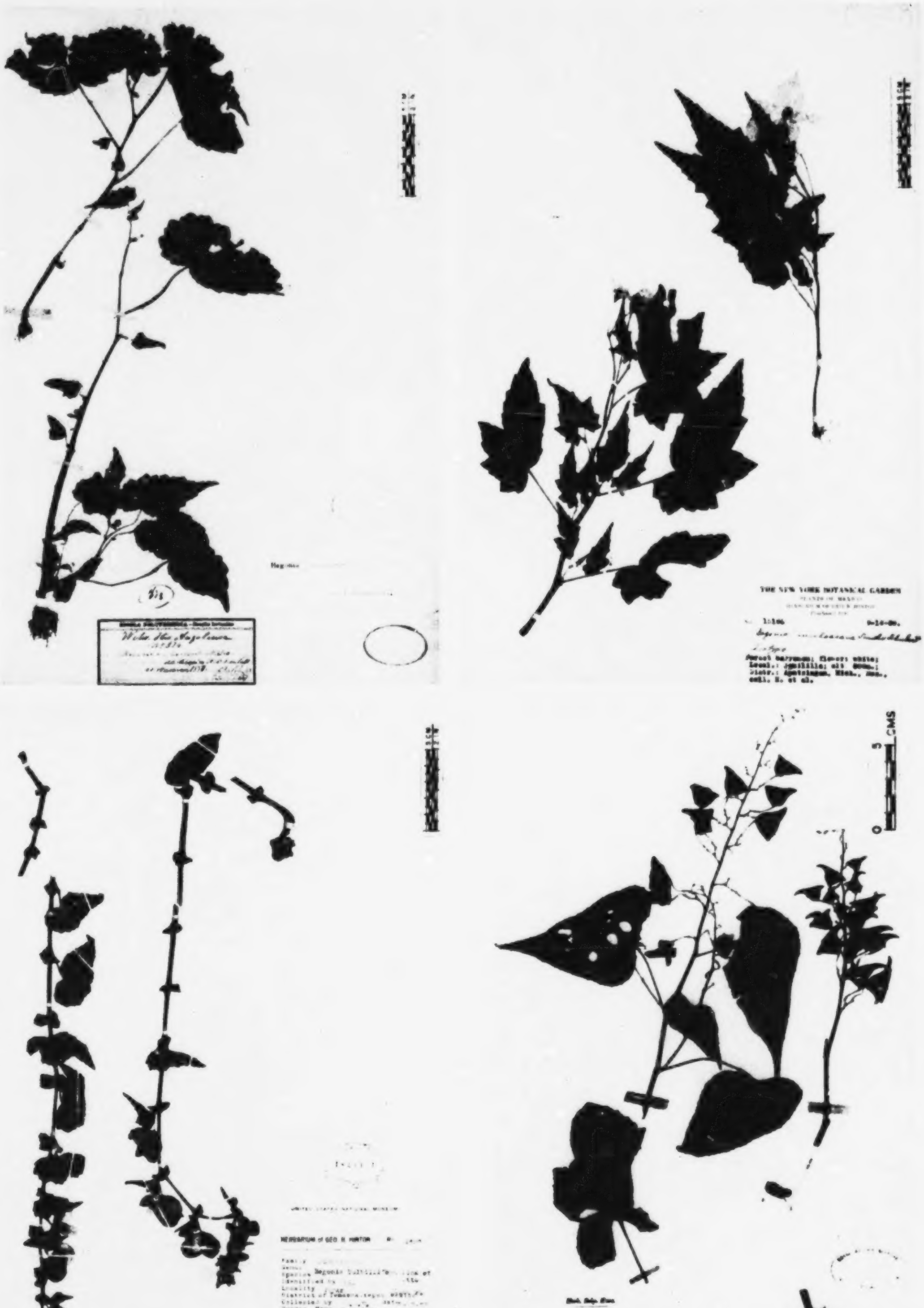
27.6, *B. ophiogyna;* 27.7, *B. bolsteri;* 27.8, *B. merrittii;* 27.9, *B. cuernavacensis.*

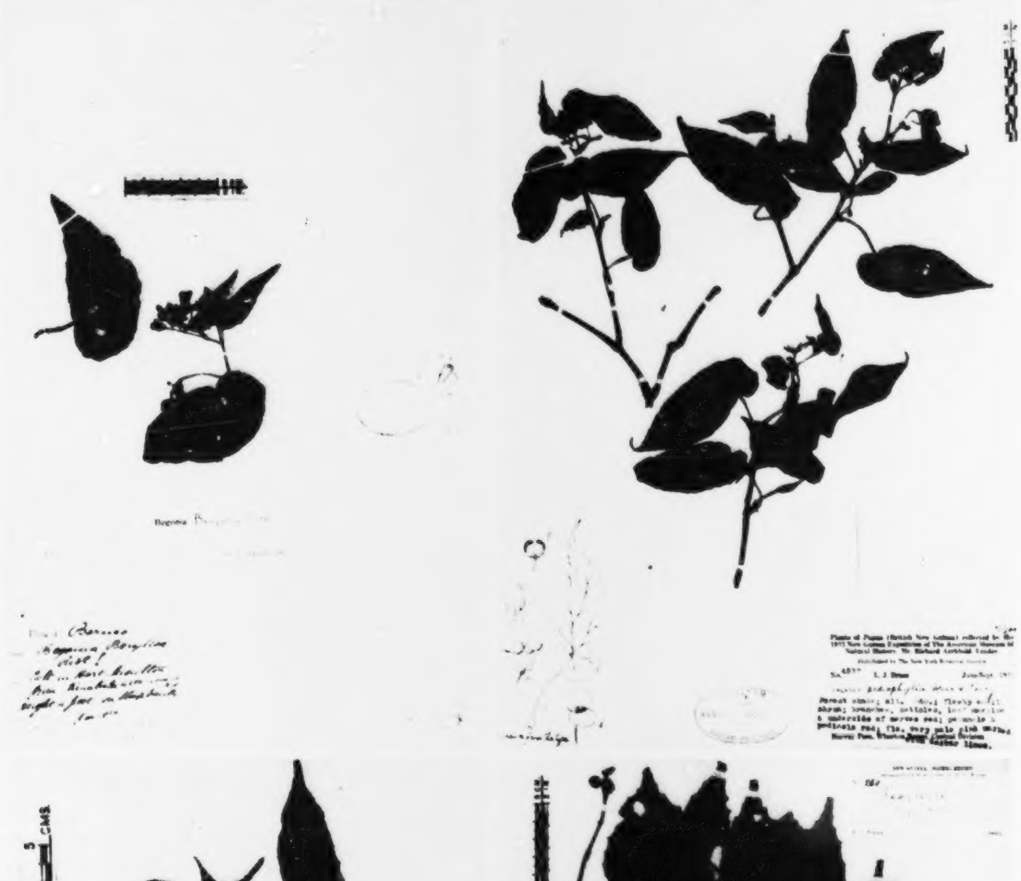

NEW YORK BOTANICAL GARDEN
FLORA OF THE PHILIPPINES
HERBARIO DEL MUSEO NACIONAL
leg. Dr. Otto Buchtien

27.10, *B. subcostata;* 27.11, *B. cumingii;* 27.12, *B. ramosii;* 27.13, *B. oblanceolata.*

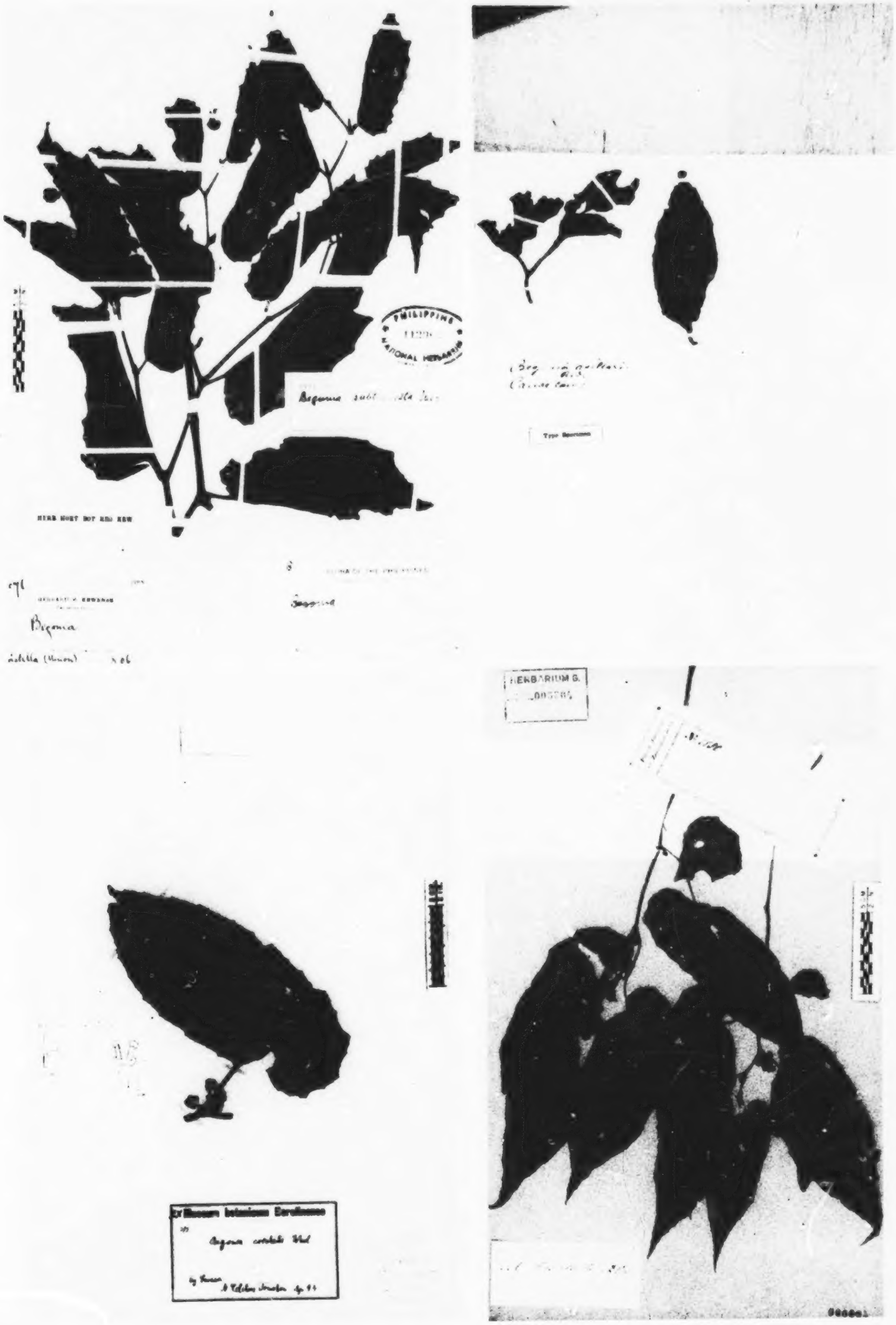


27.14, *B. rostrata;* 27.15, *B. michoacana;* 27.16, *B. bulbillifera;* 27.17, *B. modestiflora.*

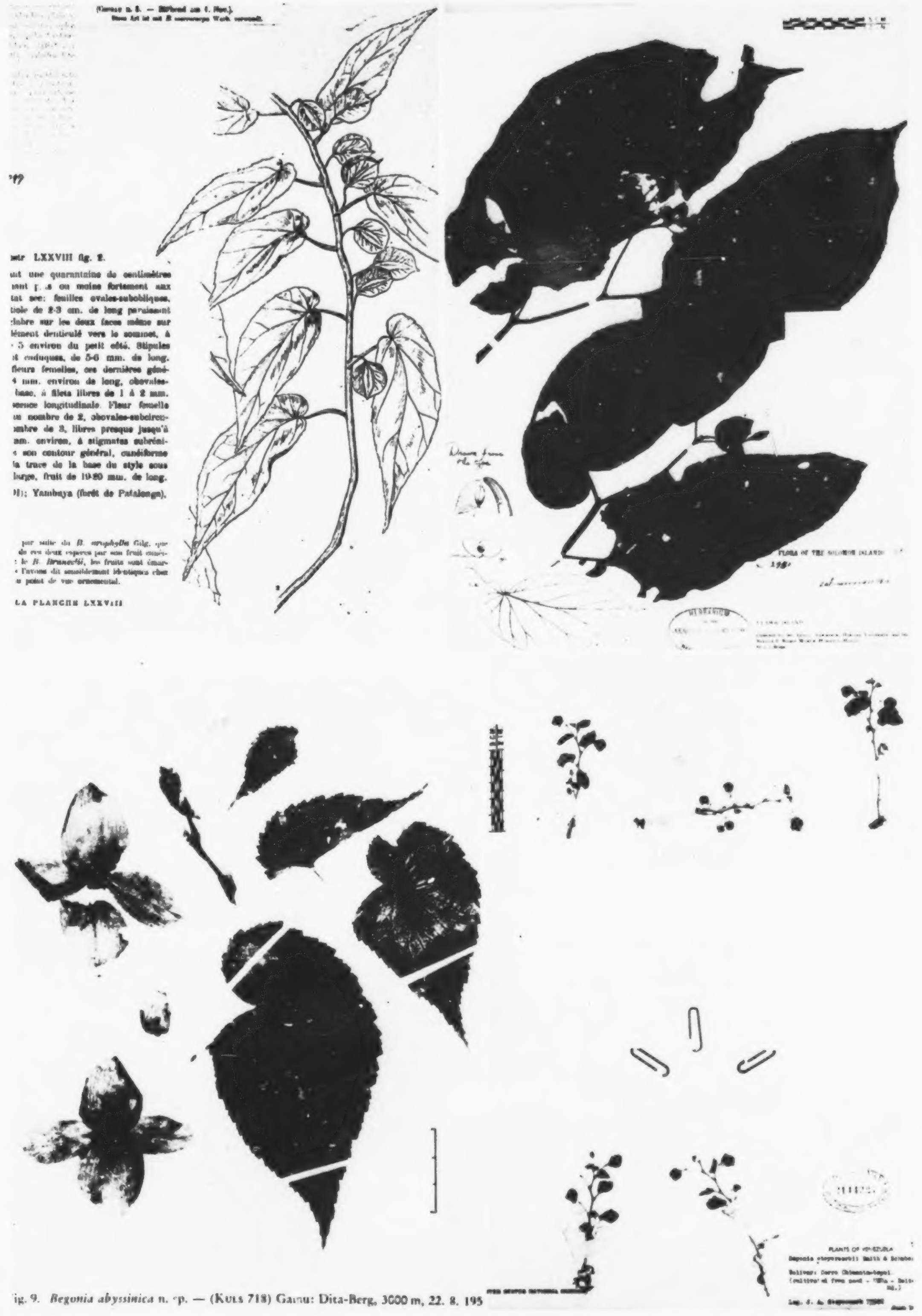
BEST COPY AVAILABLE


HERBARIUM MUS. PERAK
NEW GUINEA EXPEDITION
Type Specimen

27.18, *B. beryllae;* 27.19, *B. pediophylla;* 27.20, *B. isopteroidea;* 27.21, *B. sogerensis.*


PHILIPPINE NATIONAL HERBARIUM
Begonia
HERB HORT BOT REG KEW
Begonia
Type Specimen
HERBARIUM G.

27.22, *B. subtruncata;* 27.23, *B. axillaris;* 27.24, *B. cristata;* 27.25, *B. trisulcata.*



'17

...sur LXXVIII fig. 2.

...ut une quarantaine de centimètres
...ent p..s ou moins fortement aux
...tat sec: feuilles ovales-subobliques,
...tiole de 2-3 cm. de long paraissent
...glabre sur les deux faces même sur
...lément denticulé vers le sommet, à
... 5 environ du petit côté. Stipules
...t caduques, de 5-6 mm. de long.
...fleurs femelles, ces dernières géné-
...4 mm. environ de long, obovales-
...base, à filets libres de 1 à 2 mm.
...cence longitudinale. Fleur femelle
...u nombre de 2, obovales-subcircu-
...ombre de 3, libres presque jusqu'à
...mm. environ, à stigmates subréni-
... son contour général, cunéiforme
...la trace de la base du style sous
...large, fruit de 10-20 mm. de long.

...1); Yambuya (forêt de Patalonga).

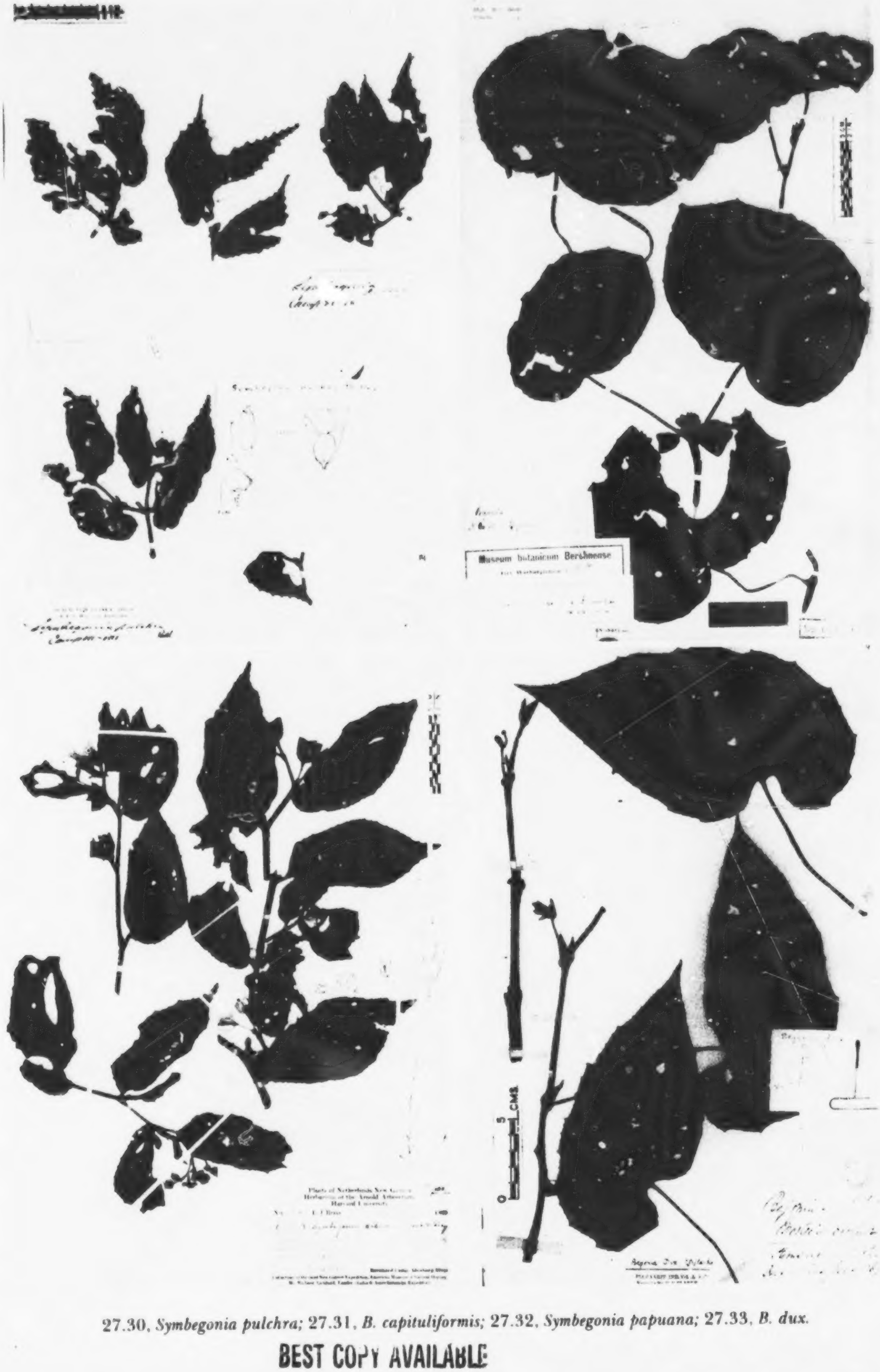
...par suite du *B. europhylla* Gilg, que
...de ces deux espèces par son fruit ...
...: le *B. Bruneelii*, les fruits sont échan-
...l'avons dit sensiblement identiques chez
...u point de vue ornemental.

...LA PLANCHE LXXVIII

Drawn from the type
FLORA OF THE SOLOMON ISLANDS
PLANTS OF VENEZUELA
Begonia steyermarkii Smith & Schubert
Bolivar: Cerro Chimanta-tepui

...ig. 9. *Begonia abyssinica* n. sp. — (KULS 718) Gamu: Dita-Berg, 3000 m, 22. 8. 195

27.26, *B. macrocarpa;* 27.27, *B. salomonensis;* 27.28, *B. abyssinica;* 27.29, *B. steyermarkii.*


Museum botanicum Berolinense
CMS
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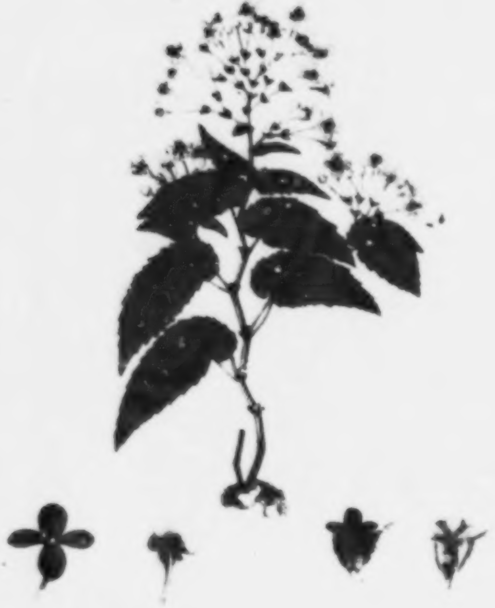
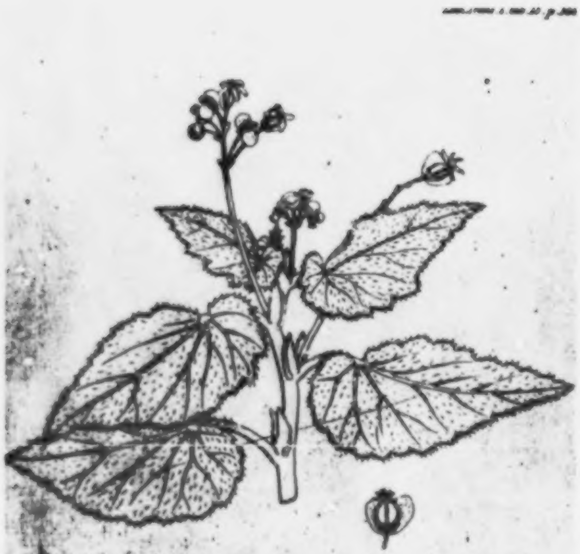
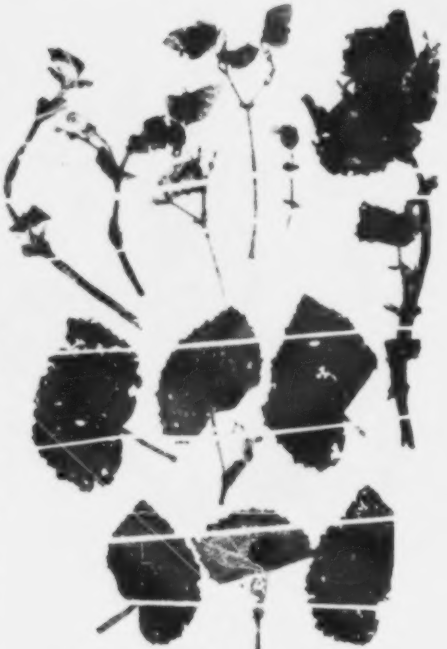
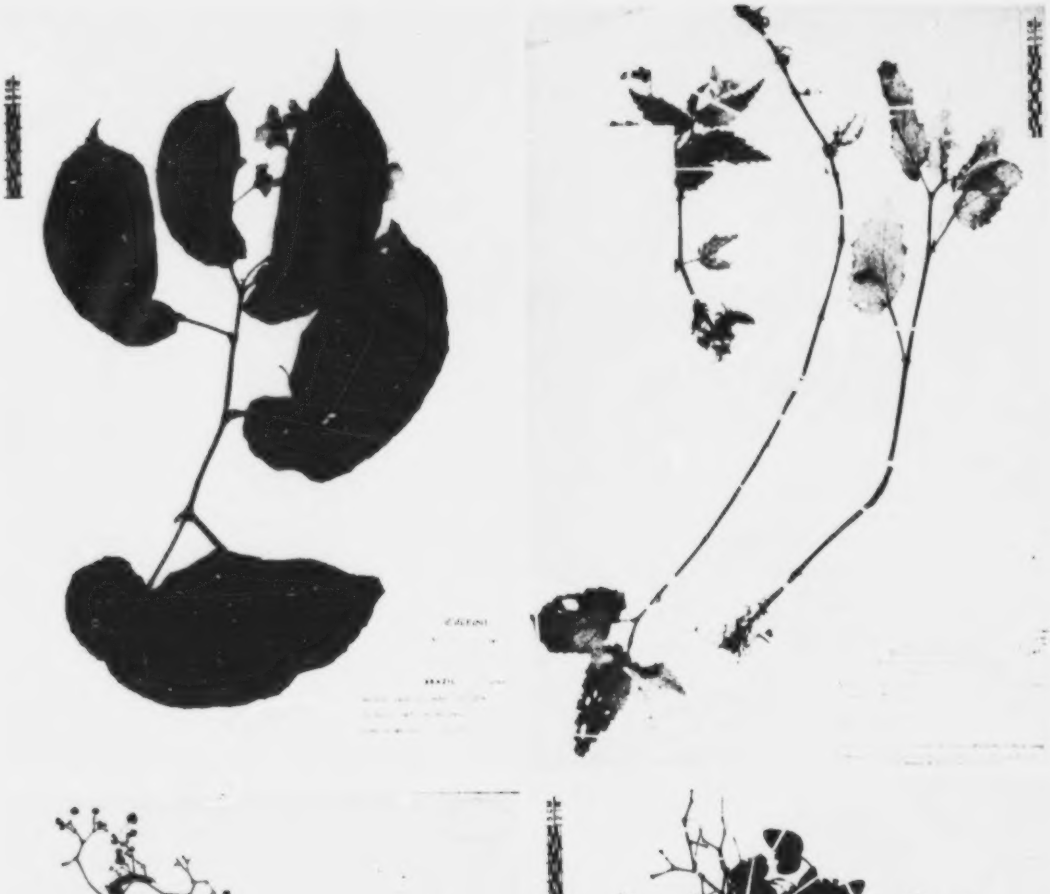
27.30, *Symbegonia pulchra;* 27.31, *B. capituliformis;* 27.32, *Symbegonia papuana;* 27.33, *B. dux.*







27.34, *B. pedunculosa;* 27.35, *B. annobonensis;* 27.36, *B. humilis;* 27.37, *B. subvillosa.*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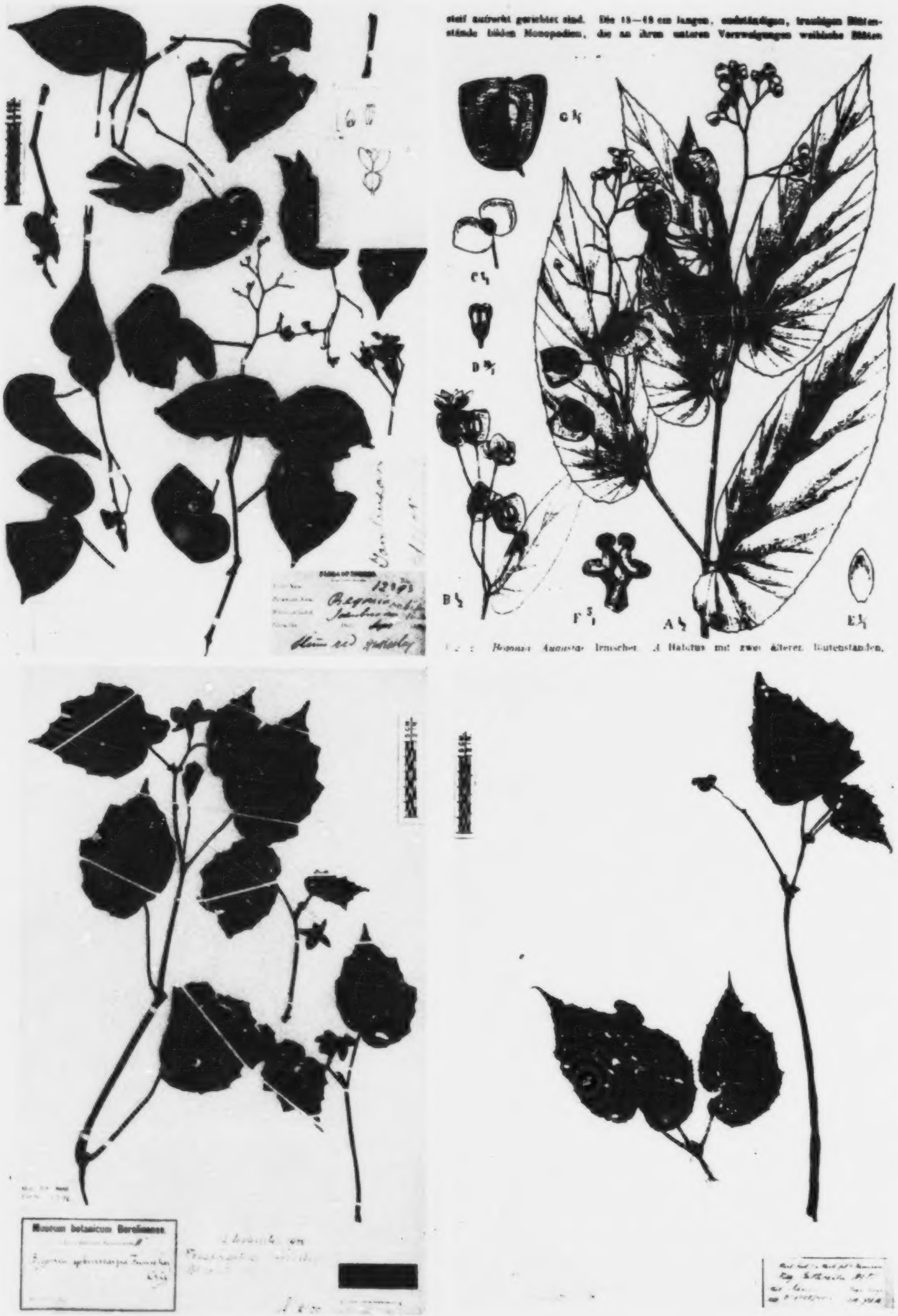
Begonia borneensis A. DC.
Begonia nubicola Smith & Schubert

27.38, *B. handroi;* 27.39, *B. brassii;* 27.40, *B. tawaënsis;* 27.41, *B. nubicola.*

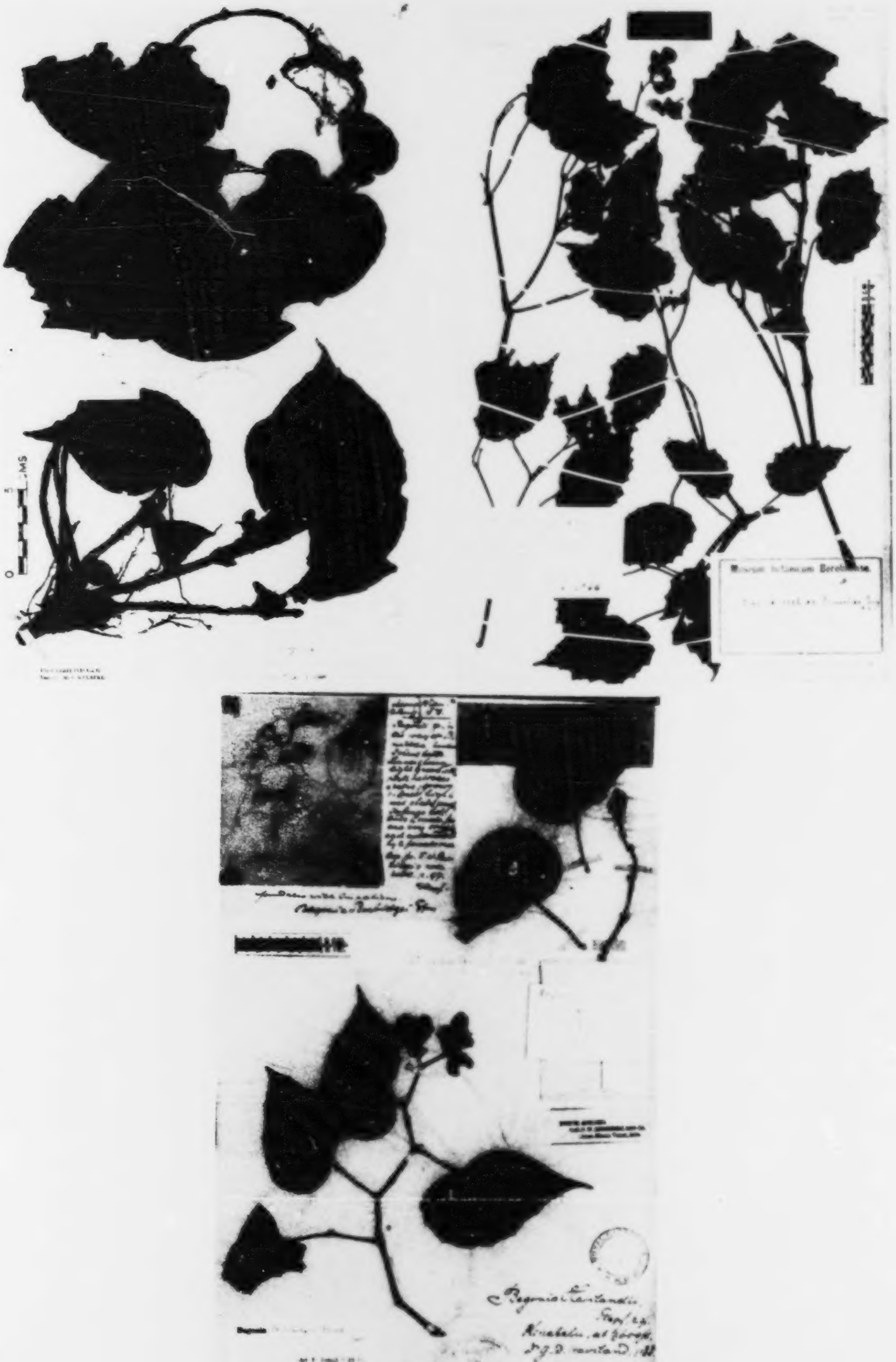


steif aufrecht gerichtet sind. Die 15—45 cm langen, endständigen, traubigen Blütenstände bilden Monopodien, die an ihren unteren Verzweigungen weibliche Blüten

G
C
D
B
F
A
E
Museum botanicum Berolinense
Begonia sphenocarpa Irmscher

Begonia Augustae Irmscher. A Habitus mit zwei älteren Blütenständen,

27.42, *B. rubida;* 27.43, *B. angustae;* 28.1, *B. sphenocarpa;* 28.2, *B. cathcartii.*


Museum Botanicum Berolinense
Begonia Burbidgei
Stapf sp. n.
Kinabalu, at gorge

28.3, *B. thomsonii;* 28.4, *B. celebica;* 28.5, *B. burbidgei.*

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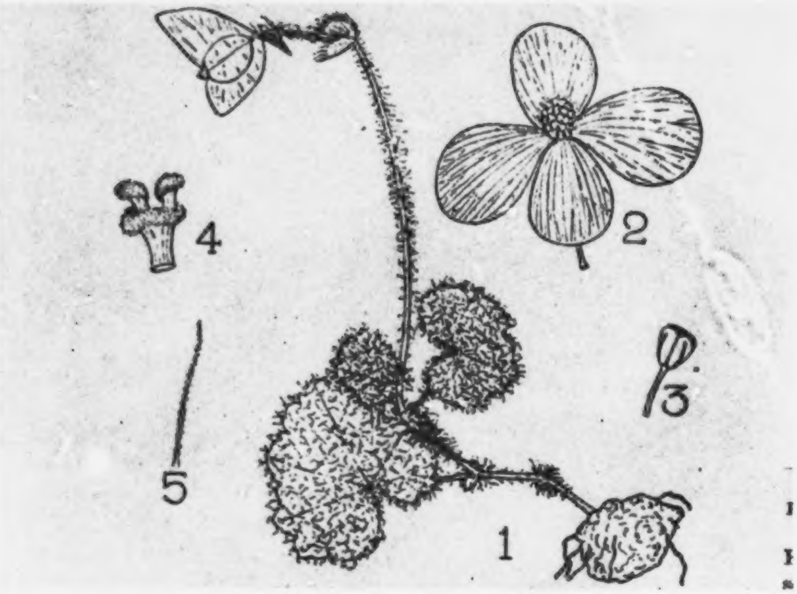
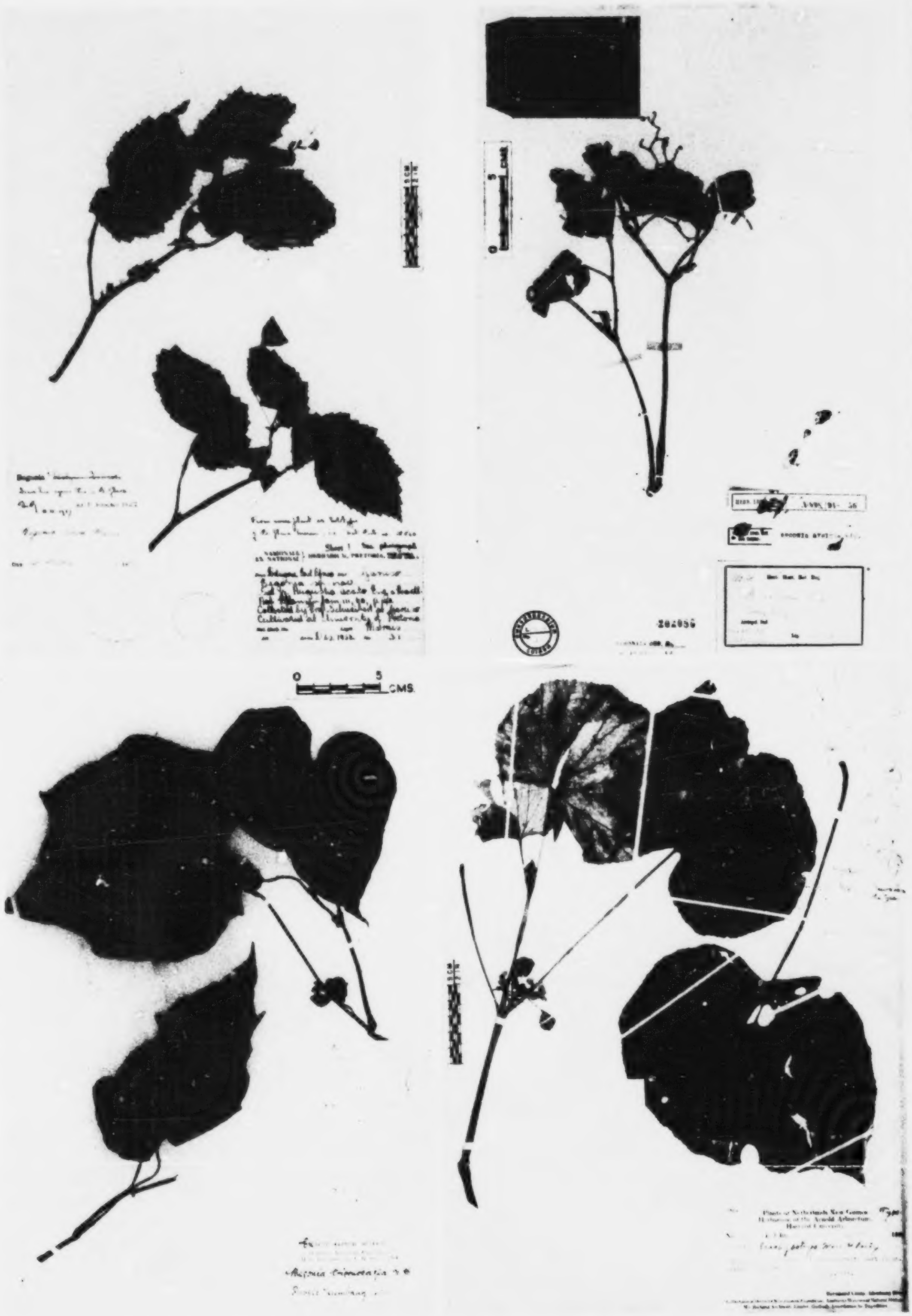
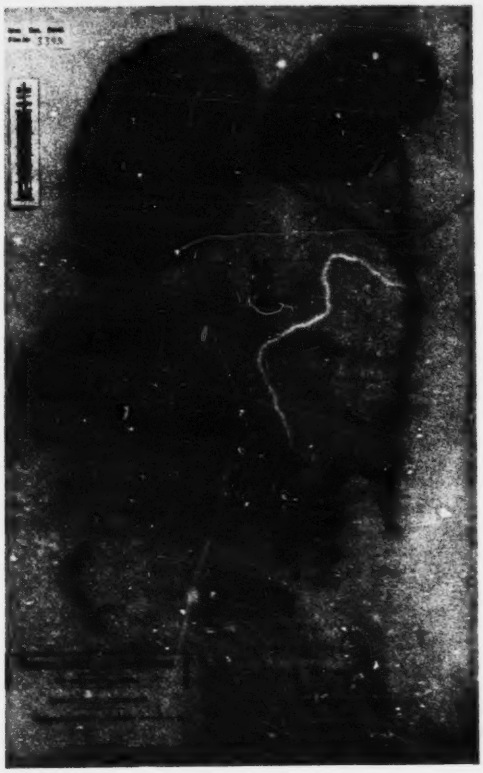


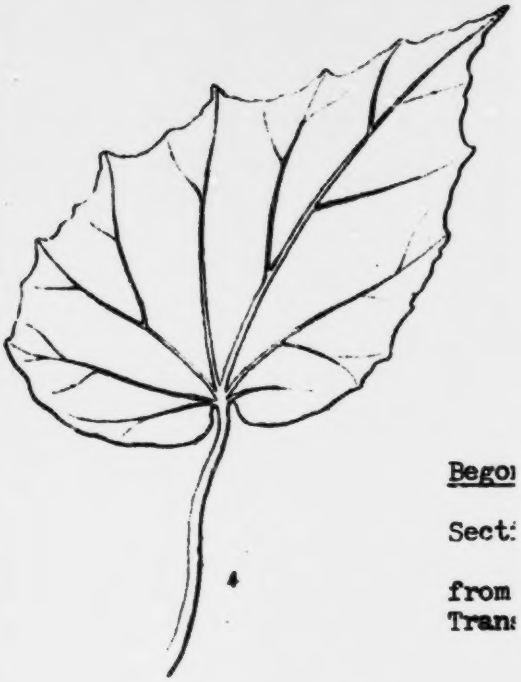
Isotype
PLANTS OF PERU

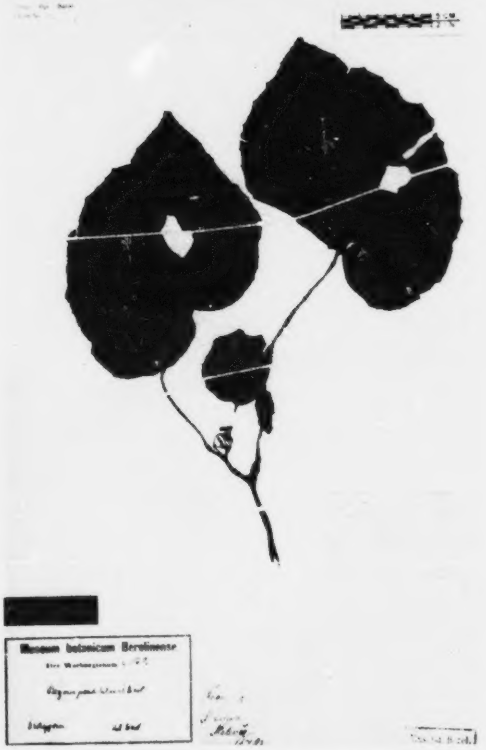
28.6, *B. tafiensis;* 28.7, *B. weddelliana;* 28.8, *B. thyrsoidea.*

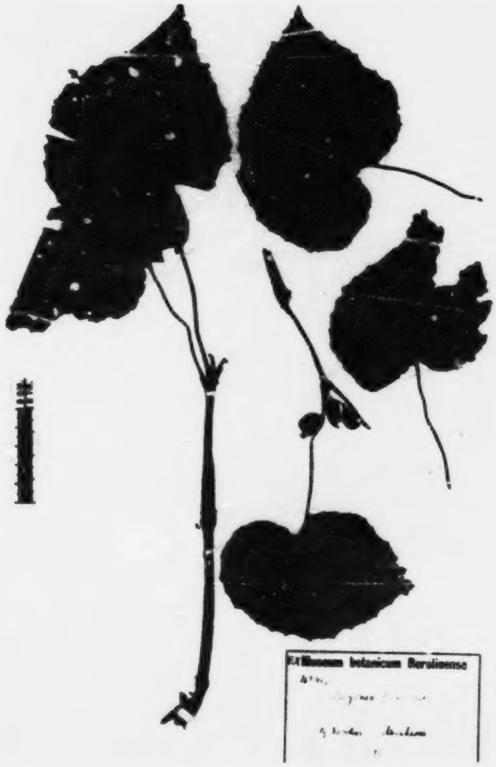


28.9, *B. flava;* 28.10, *B. atricha;* 28.11, *B. trigonocarpa;* 28.12, *B. brachybotrys.*

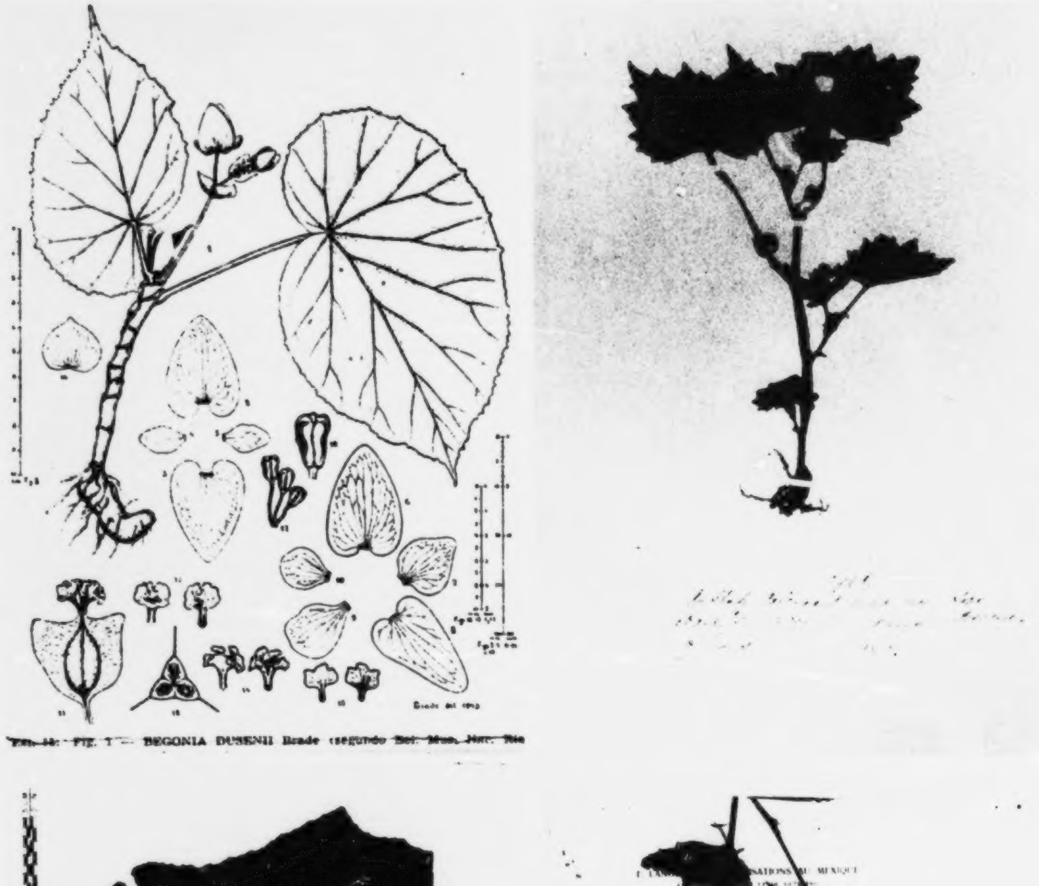



Begon
Sect
from
Trans

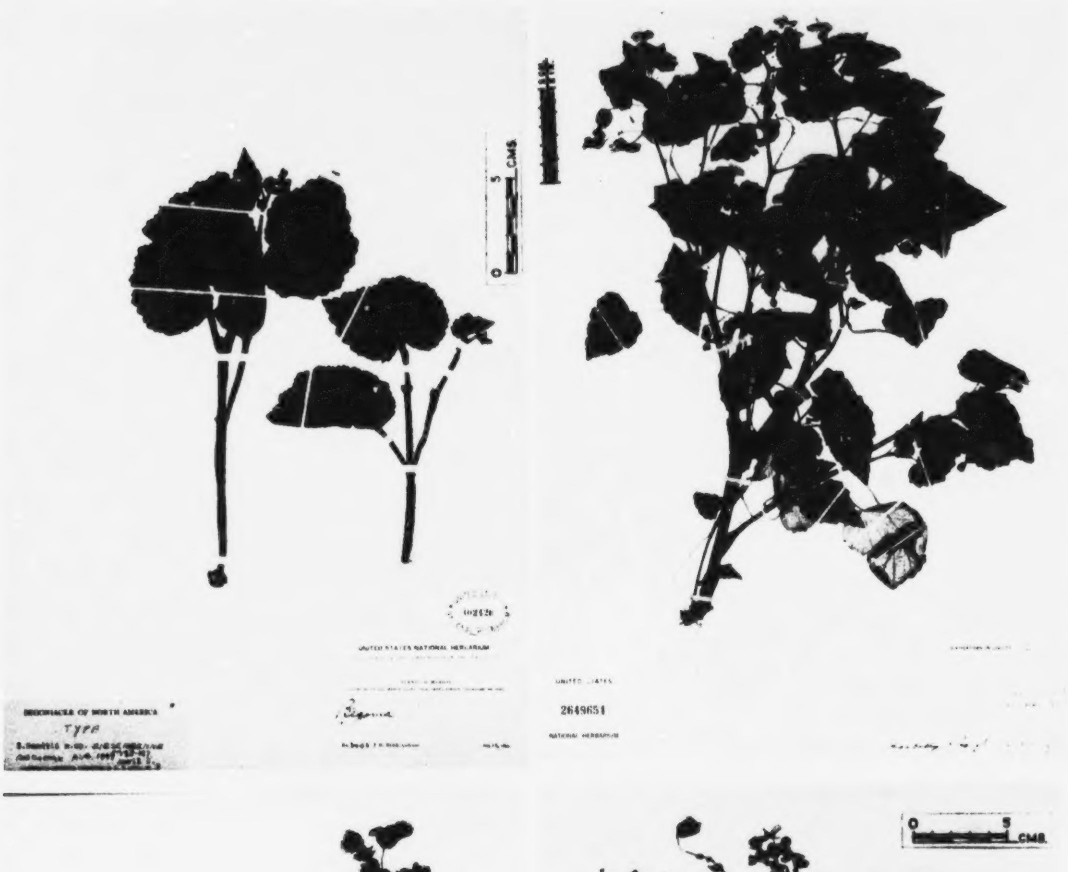

Museum botanicum Berolinense


Museum botanicum Berolinense

28.13, *B. strictipetiolaris;* 28.14, *B. tenuifolia;* 28.15, *B. pseudolateralis;* 28.16, *B. koordersii.*


BEGONIA DUSENII Brade (segundo Bol. Mus. Nat. Rio
TYPE
UNITED STATES NATIONAL MUSEUM

28.17, *B. barkleyana;* 28.18, *B. exigua;* 28.19, *B. extranea;* 28.20, *B. fusibulba.*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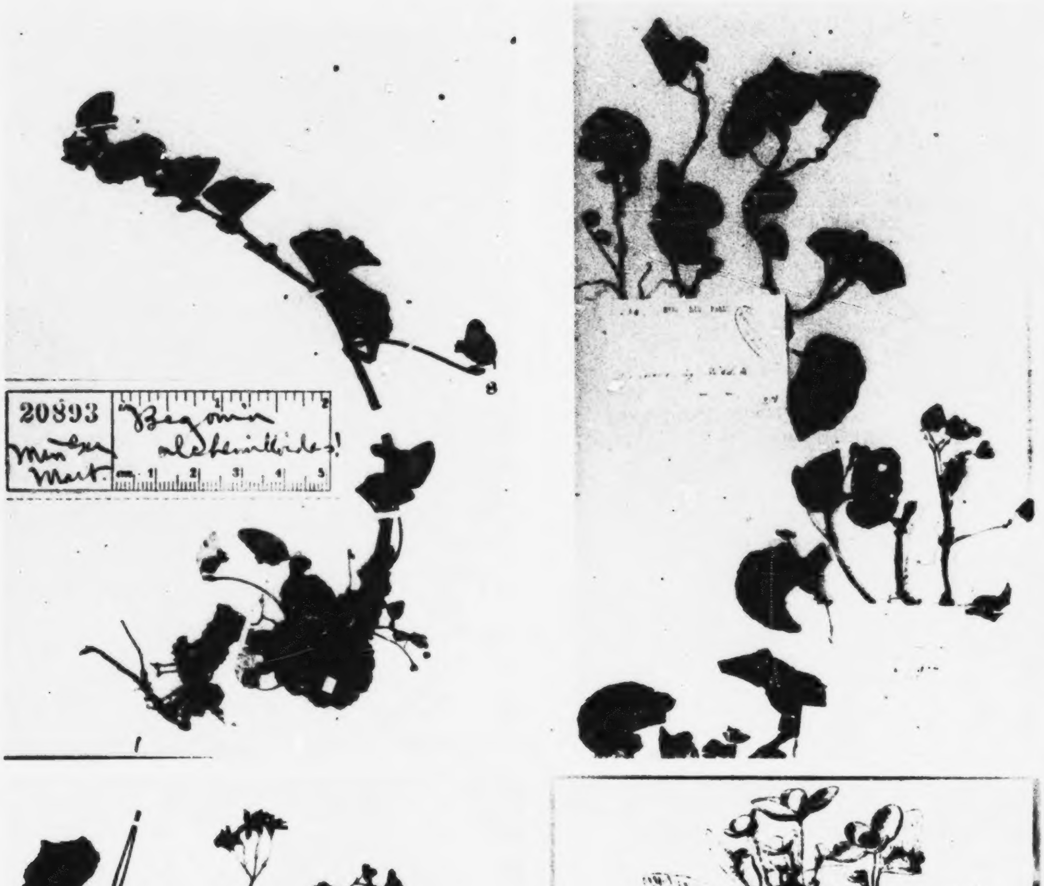
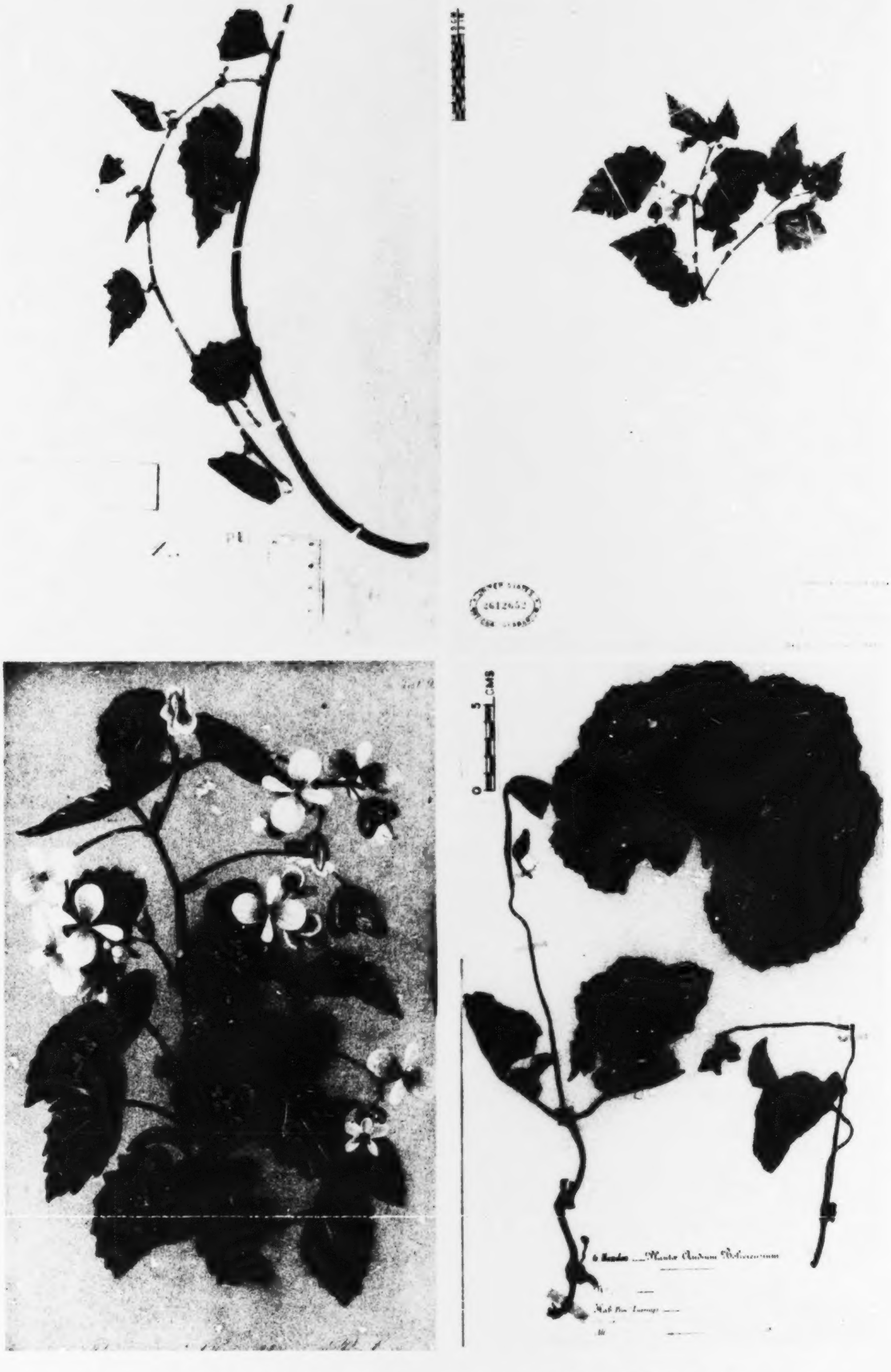
Type
BEGONIACEAE OF NORTH AMERICA
UNITED STATES NATIONAL HERBARIUM
UNITED STATES
2649651
NATIONAL HERBARIUM
HARVARD

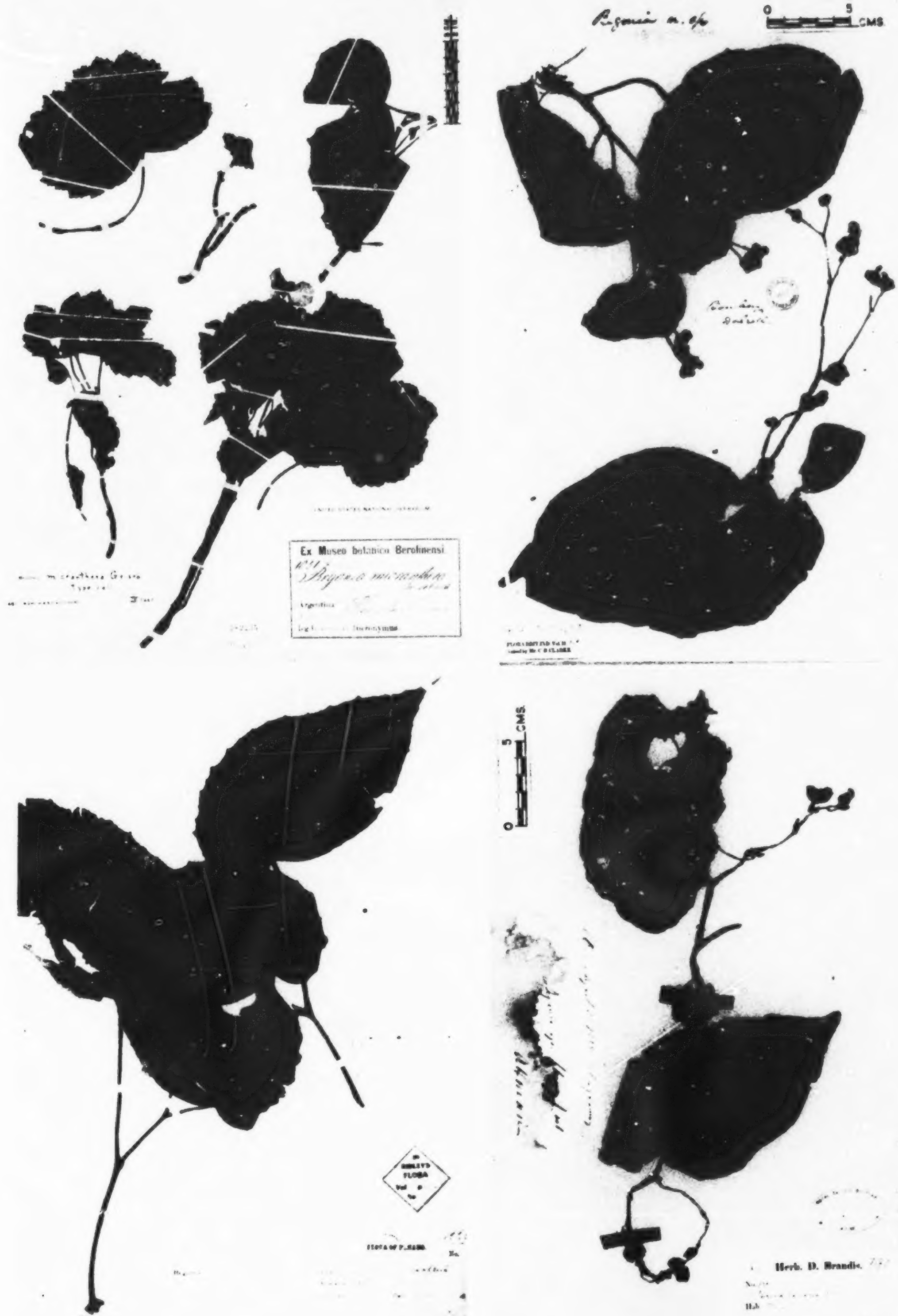
28.21, *B. sandtii;* 28.22, *B. wallichiana;* 28.23, *B. boissieri;* 28.24, *B. palmeri.*


20893
"Begonia alchemilloides!
Min. ex Mart.
TYPE

28.25, *B. alchemilloides;* 28.26, *B. hirtella;* 28.27, *B. hintoniana;* 28.28, *B. wattii.*



28.29, *B. gracilis;* 28.30, *B. cavum;* 28.31, *B. schmidtiana;* 28.32, *B. clarkei.*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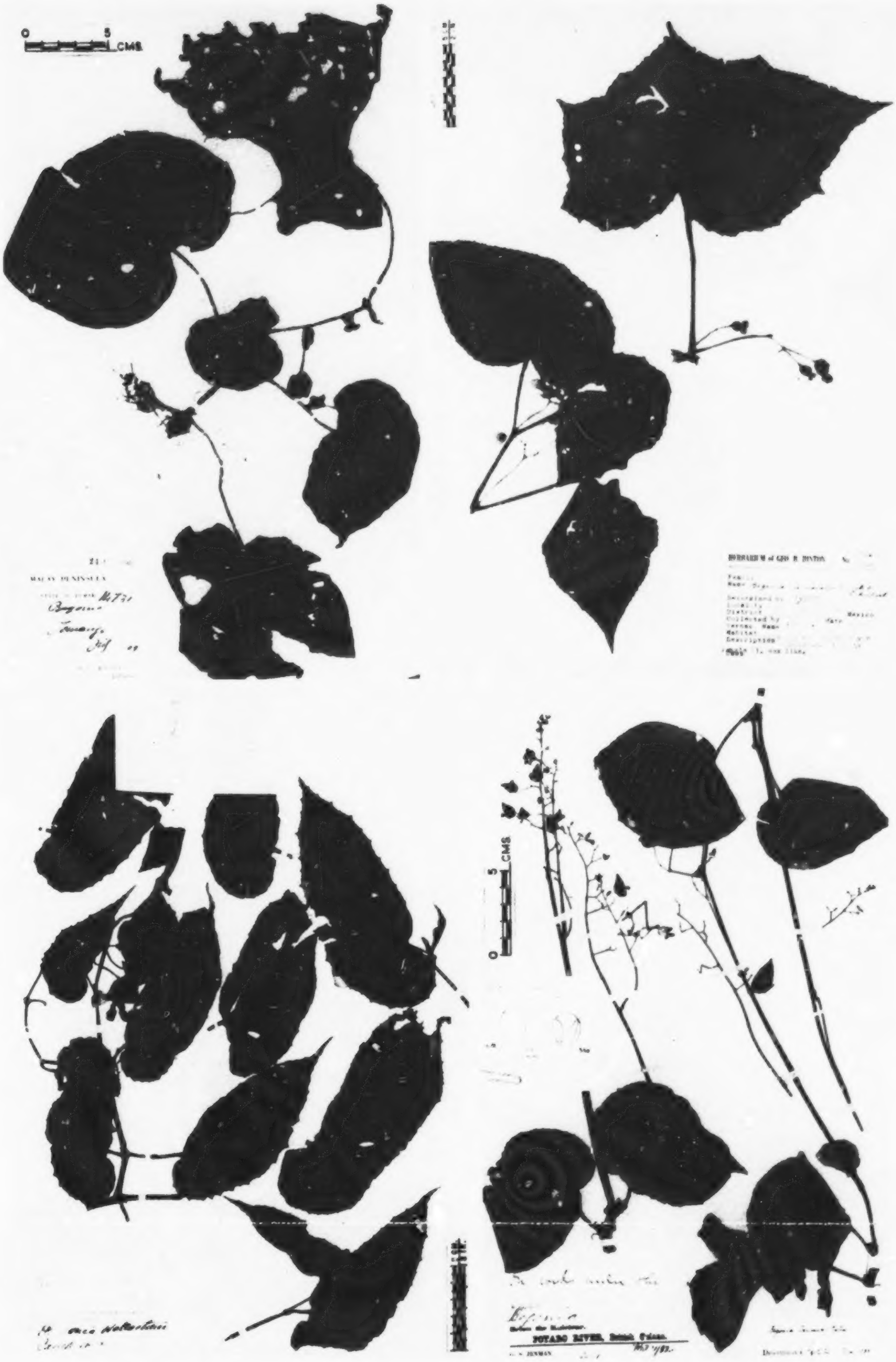
Ex Museo botanico Berolinensi
Herb. D. Brandis.

28.33, *B. micranthera;* 28.34, *B. integrifolia;* 28.35, *B. holttumii;* 28.36, *B. paleacea.*


0
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CMS
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5
CMS
POTARO RIVER, British Guiana.

28.37, *B. leucantha;* 28.38, *B. nemoralis;* 28.39, *B. wollastonii;* 28.40, *B. jenmanii.*

Begonia
HERBARIUM HORTI BOTANICI MATRITENSIS

28.41, *B. zollingerana;* 28.42, *B. weberlingii;* 28.43, *B. relicta;* 28.44, *B. dregei.*

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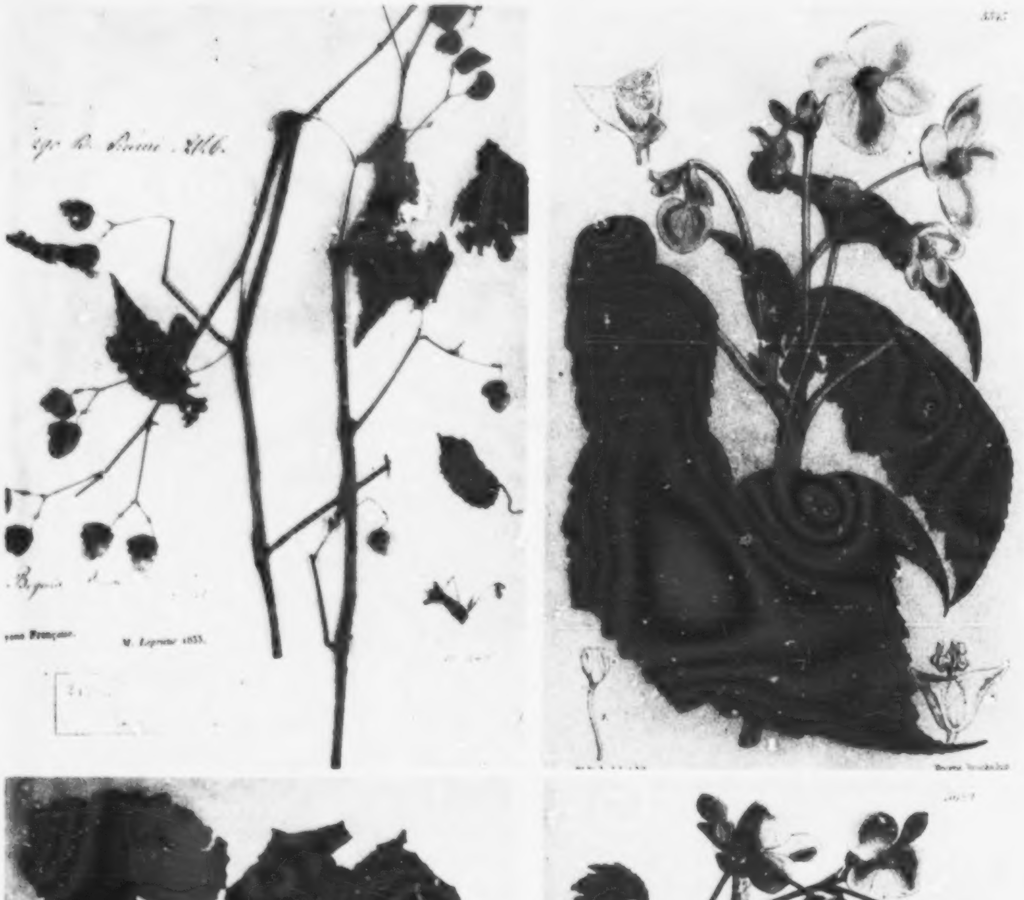
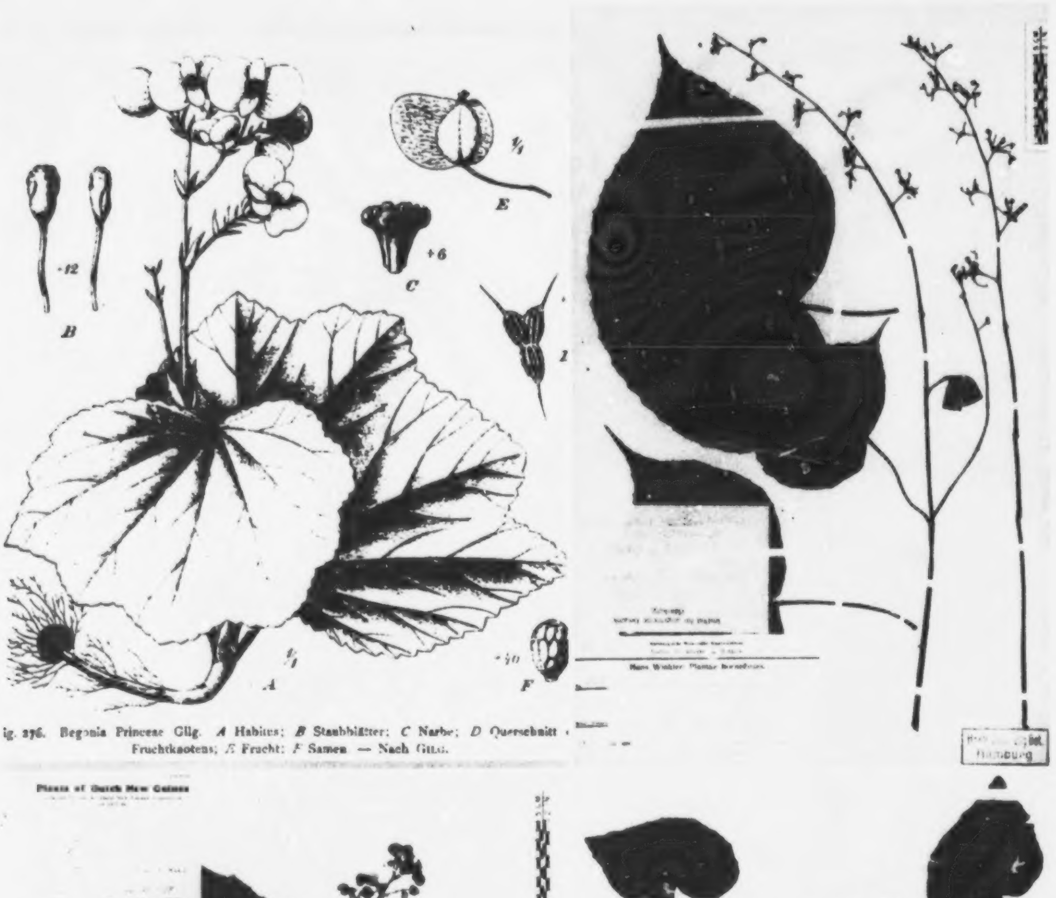
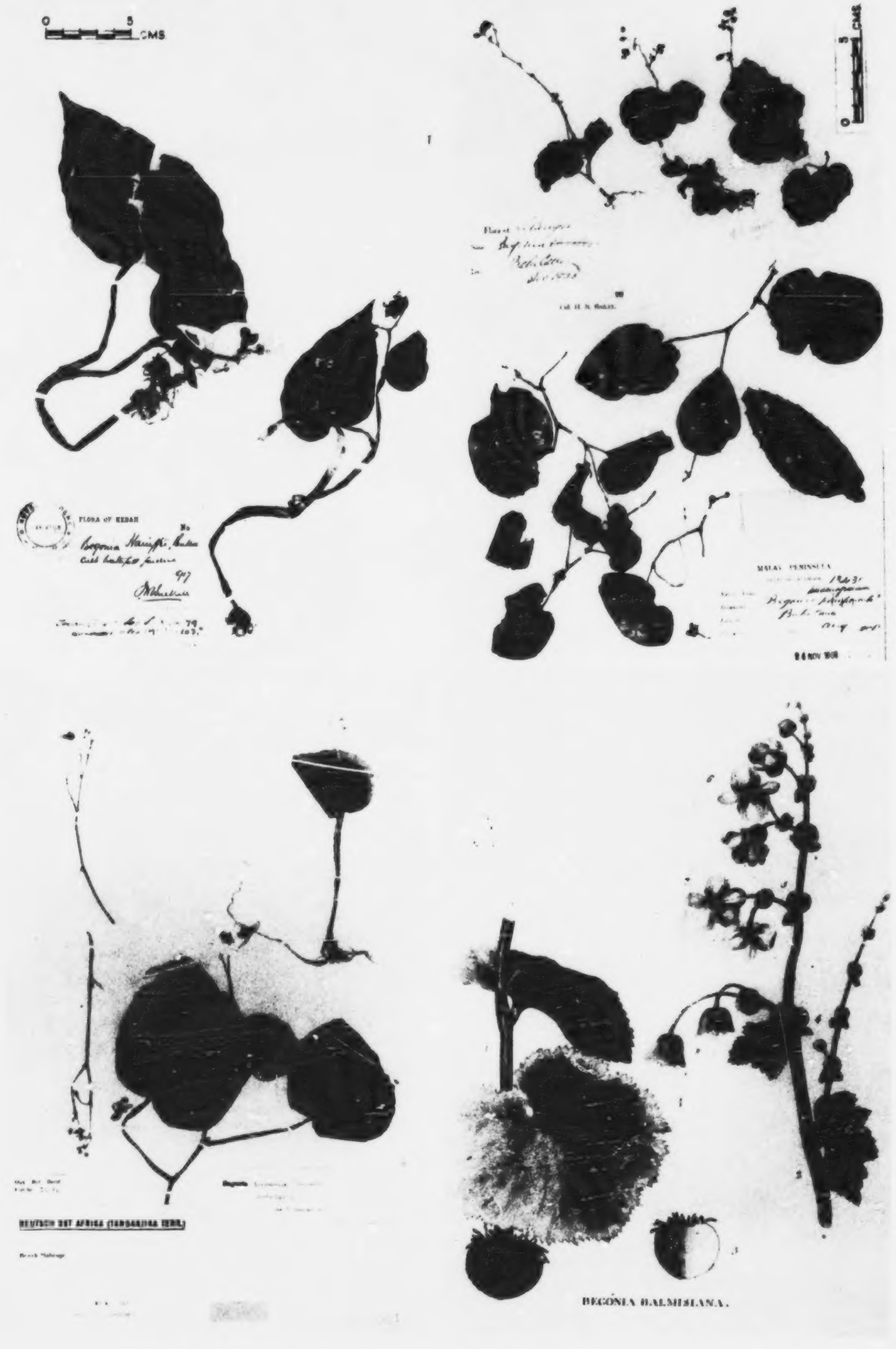

M. Leprieur 1833.

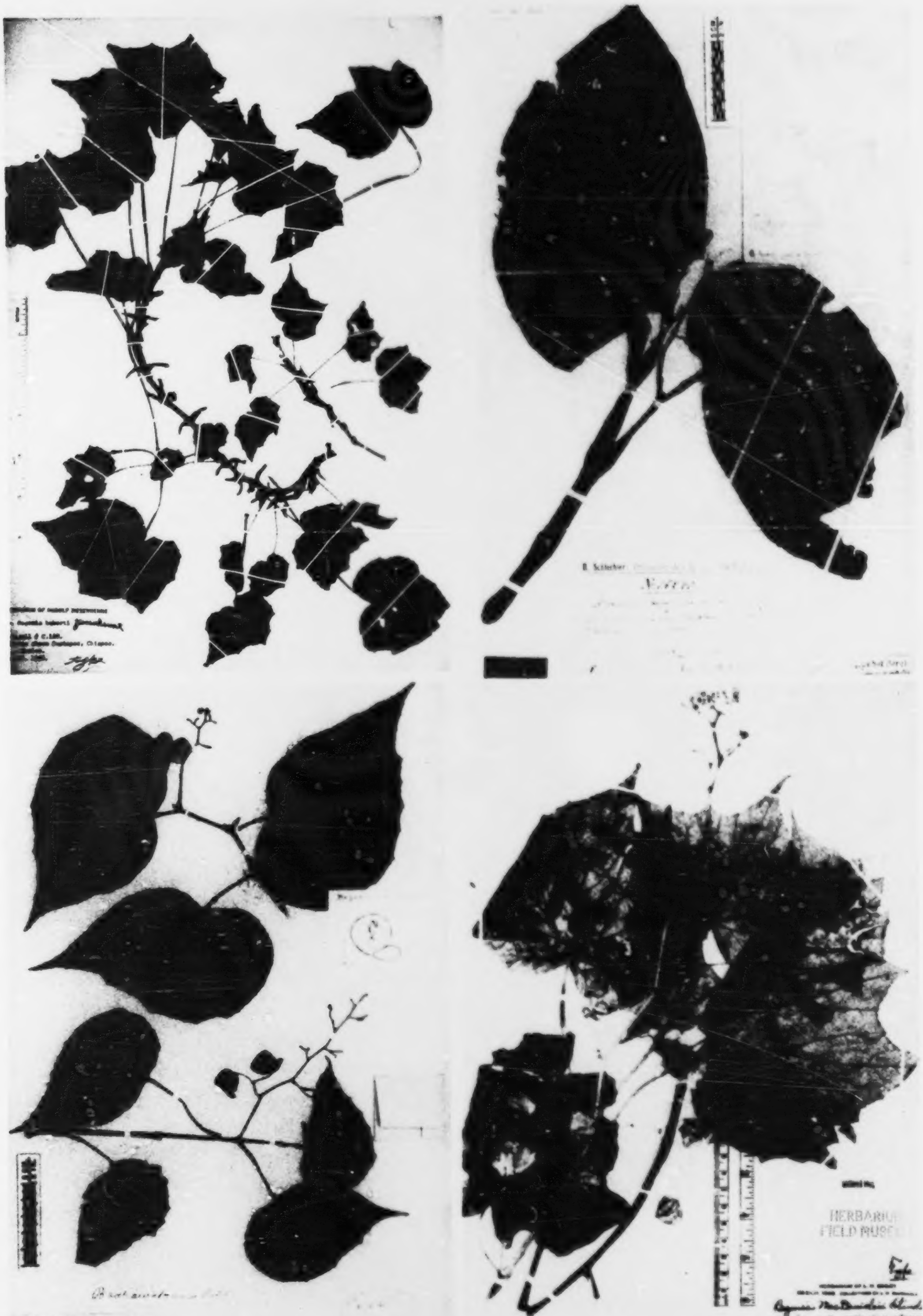
28.45, *B. prieurii;* 28.46, *B. pearcei;* 28.47, *B. lanstyakii;* 28.48, *B. sutherlandii.*


A
B
C
D
E
F
×12
×6
×40
ig. 276. Begonia Princeae Gilg. A Habitus; B Staubblätter; C Narbe; D Querschnitt
Fruchtknotens; E Frucht; F Samen — Nach Gilg.
Hamburg
Plants of Dutch New Guinea
Herbarium of the Arnold Arboretum
Harvard University
Begonia
MALAY PENINSULA

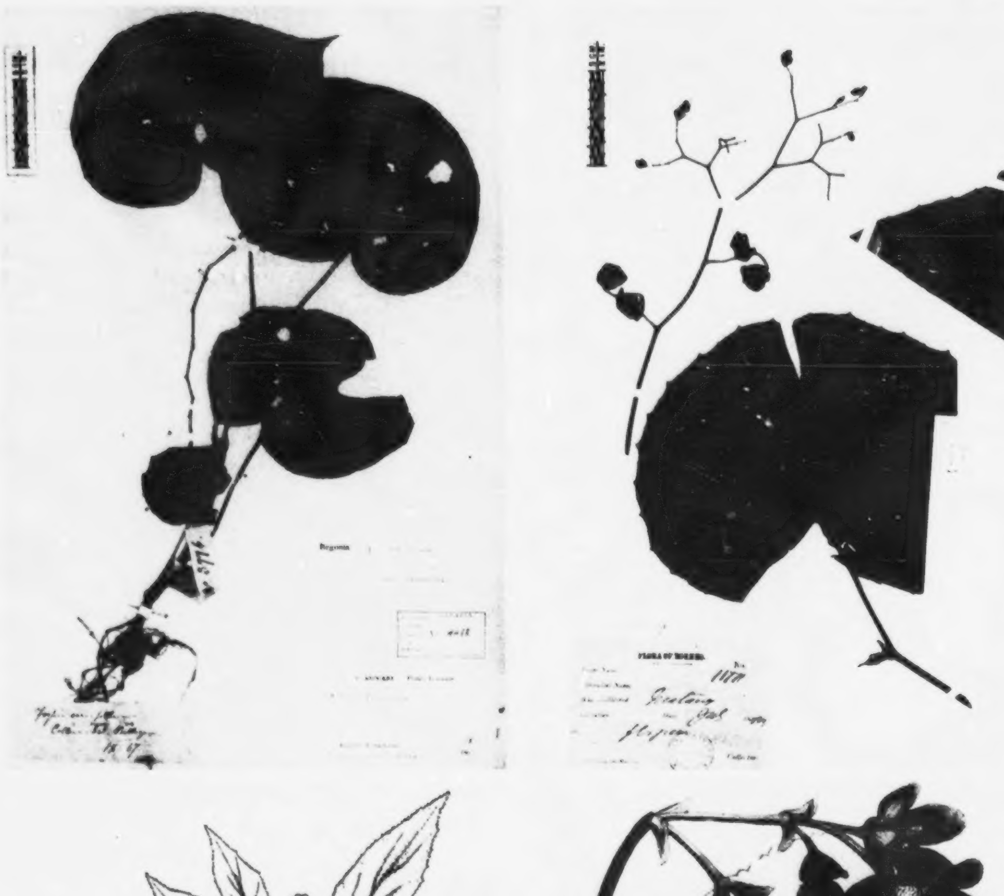
28.49, *B. princeae;* 28.50, *B. walterana;* 28.51, *B. novoguineensis;* 28.52, *B. curtisii.*


0 5 CMS
FLORA OF KEDAH
Begonia Haniffii
MALAY PENINSULA
DEUTSCH OST AFRIKA (TANGANJIKA TERR.)
BEGONIA BALMISIANA.
1
2
3

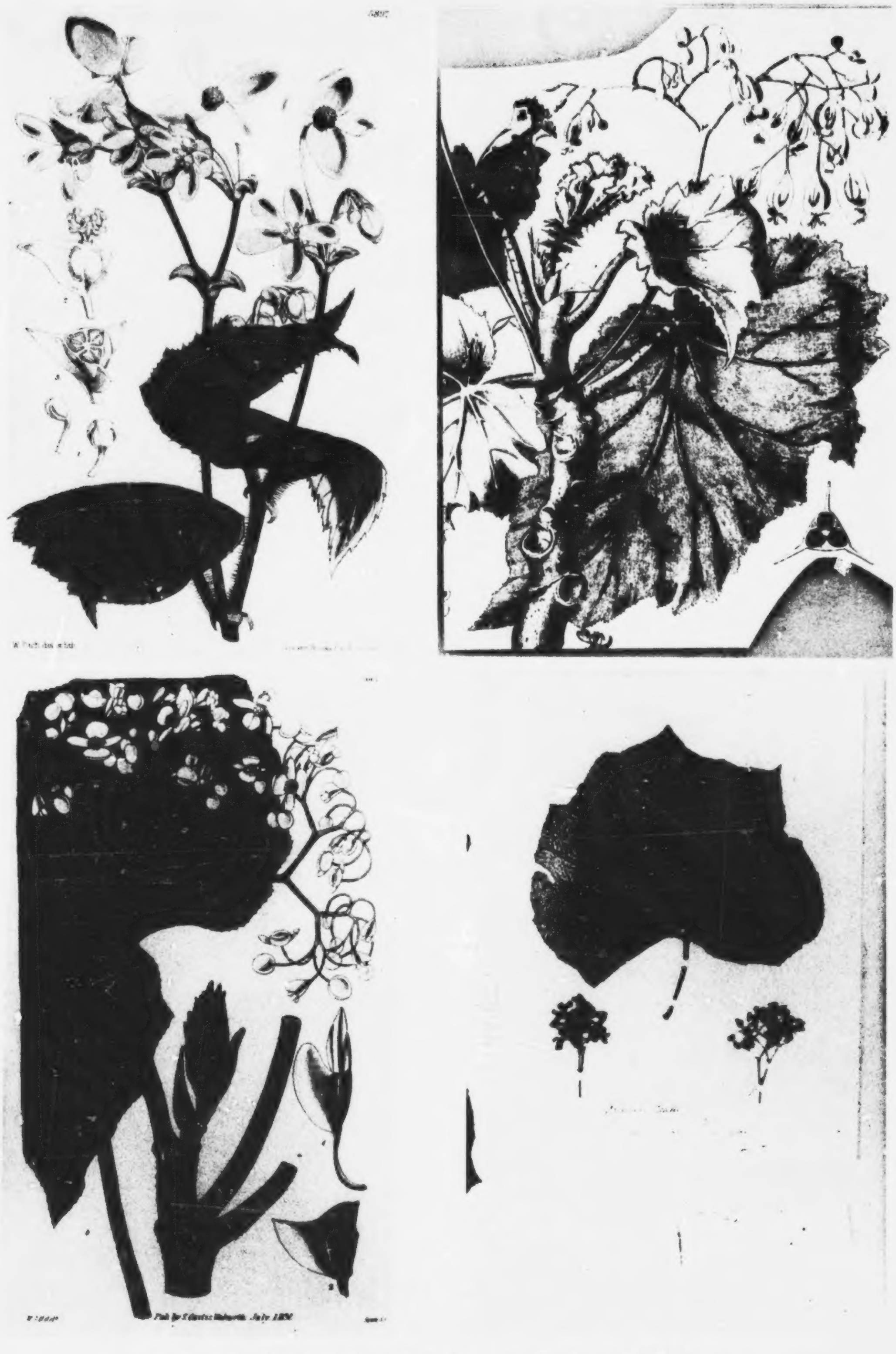
28.53, *B. haniffii;* 28.54, *B. phoeniogramma;* 28.55, *B. riparia;* 28.56, *B. balmisiana.*


HERBARIUM
FIELD MUSEU

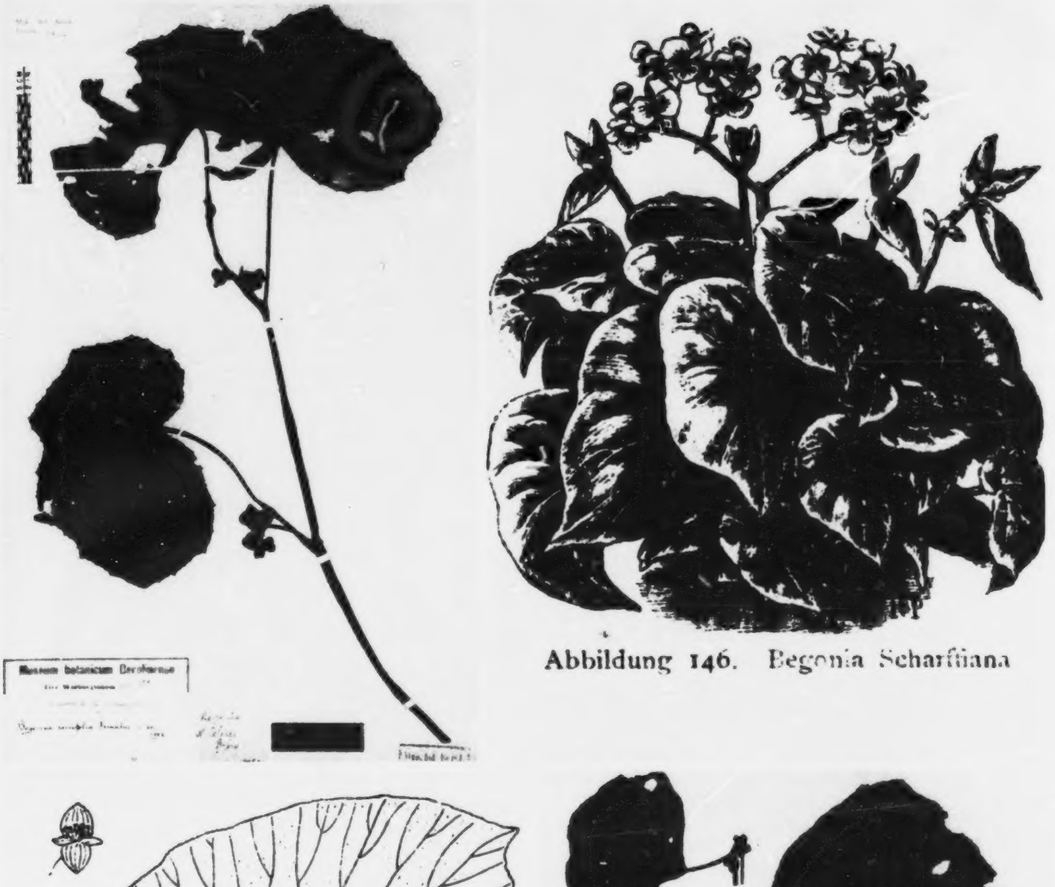
28.57, *B. huberti;* 28.58, *B. brevirimosa;* 28.59, *B. sarawakensis;* 28.60, *B. macdanielsii.*


Begonia
1177
1
2
3
4
5
6
7
8

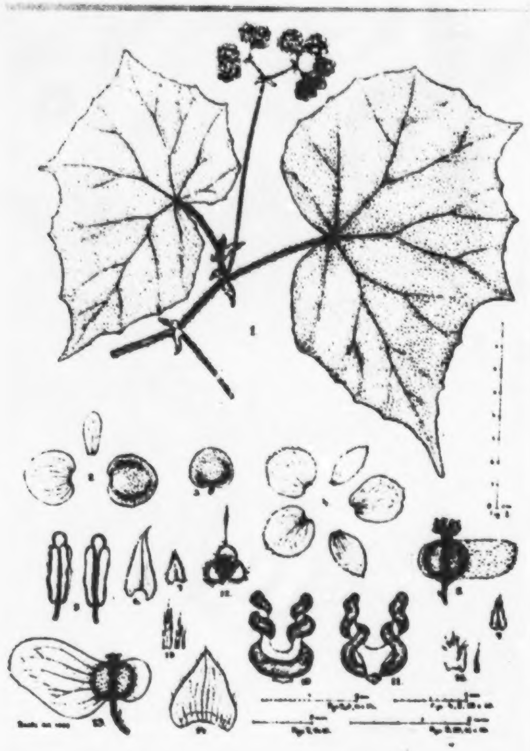
28.61, *B. cognata;* 28.62, *B. propinqua;* 29.1, *B. obscura;* 29.2, *B. cinnabarina.*



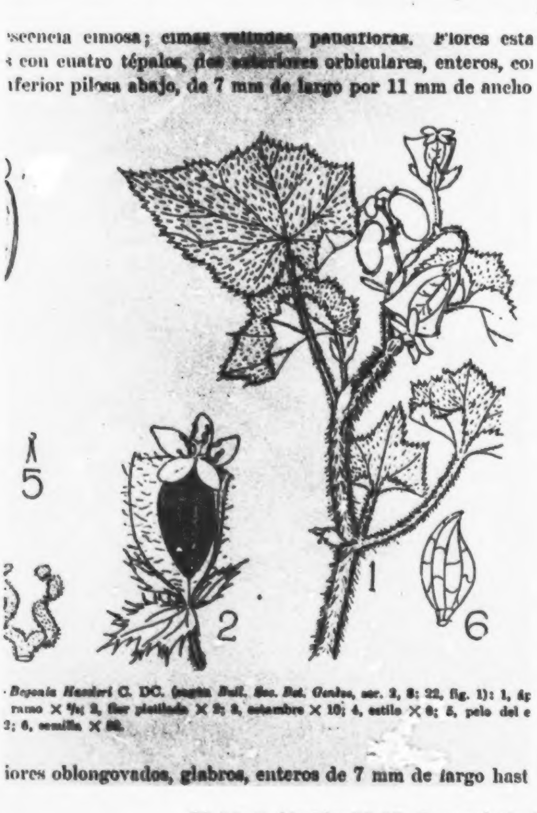
29.3, *B. crinita;* 29.4, *B. phyllomaniaca;* 29.5, *B. reniformis;* 29.6, *B. huegelii.*


Museum botanicum Berolinense
Abbildung 146. Begonia Scharffiana
B
A
C
E
D
FIGURE 89
Begonia otophylla

29.7, *B. renifolia;* 29.8, *B. scharffii;* 29.9, *B. otophylla;* 29.10, *B. smithiae.*

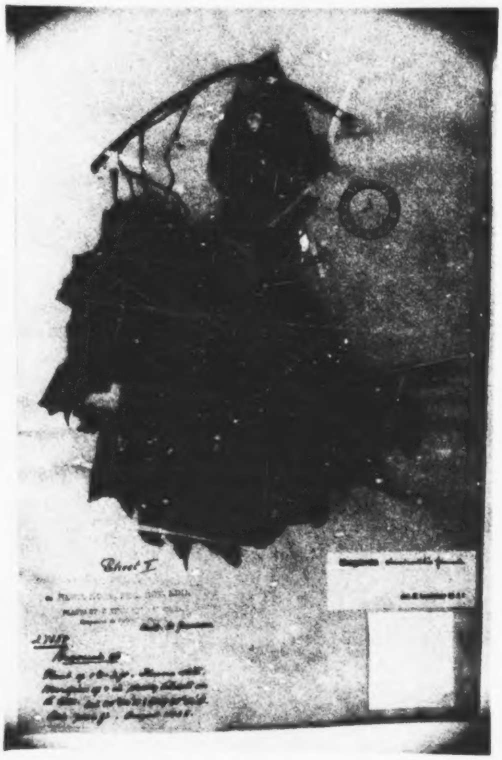


2251622
sheet
Begonia stenolepis Smith & Smith
TYPE

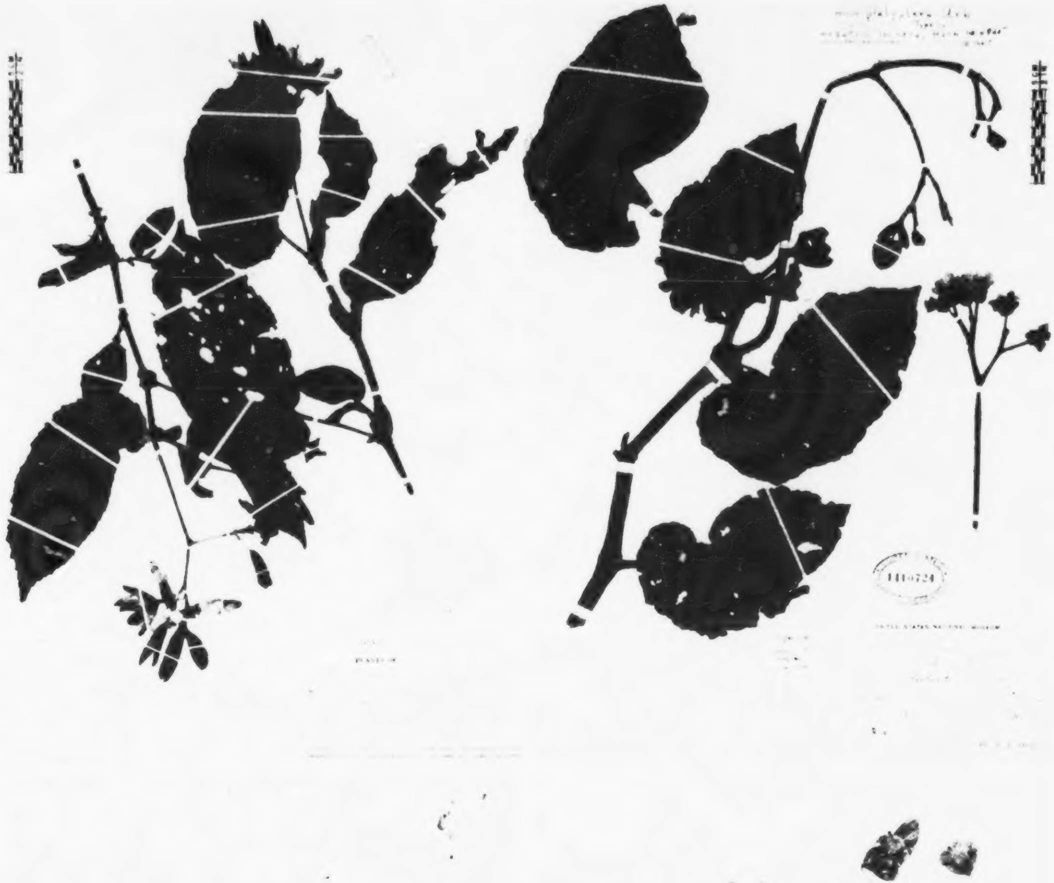

…scencia cimosa; cimas velludas, paucifloras. Flores esta…
…s con cuatro tépalos, dos exteriores orbiculares, enteros, co…
…inferior pilosa abajo, de 7 mm de largo por 11 mm de ancho

Begonia Hassleri C. DC. (según Bull. Soc. Bot. Genève, ser. 2, 8: 22, fig. 1): 1, …
ramo × ⁴/₅; 2, flor pistilada × 2; 3, estambre × 10; 4, estilo × 6; 5, pelo del e…
…3; 6, semilla × 60.

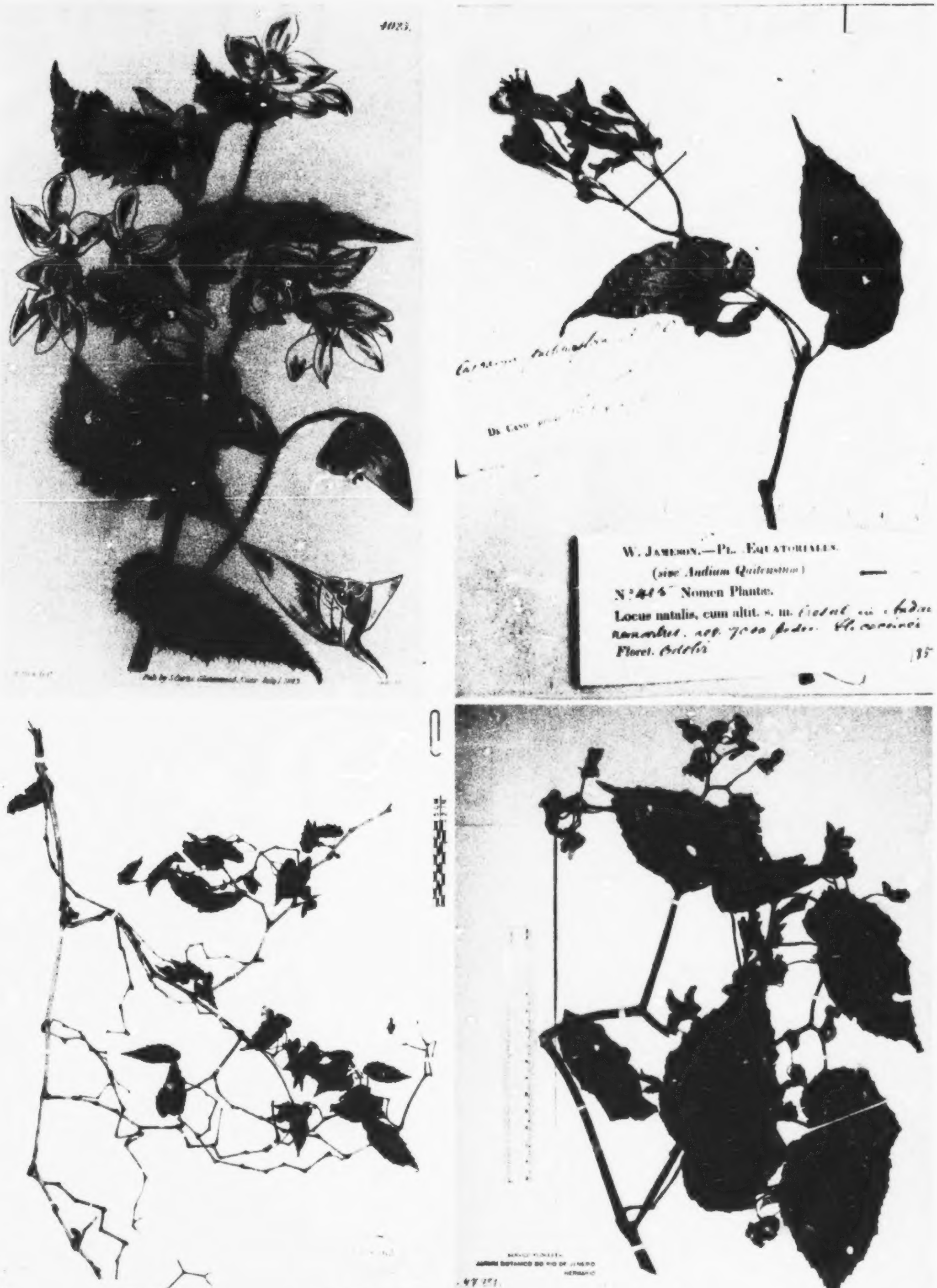
…iores oblongovados, glabros, enteros de 7 mm de largo hast…



29.11, *B. hispida;* 29.12, *B. stenolepis;* 29.13, *B. hassleri;* 29.14, *B. clavicaulis.*


Museum botanicum Berolinense

29.15, *B. hirta;* 29.16, *B. platyptera;* 29.17, *B. pulchella;* 29.18, *B. engleri.*


4025.
W. JAMESON.—PL. ÆQUATORIALES.
(sive Andium Quitensium)
N° 415 Nomen Plantæ.
Locus natalis, cum altit. s. m.
Floret.
UNITED STATES NATIONAL MUSEUM
JARDIM BOTANICO DO RIO DE JANEIRO
HERBARIO

29.19, *B. acutifolia;* 29.20, *B. fuchsiiflora;* 29.21, *B. trapa;* 29.22, *B. occhionii.*

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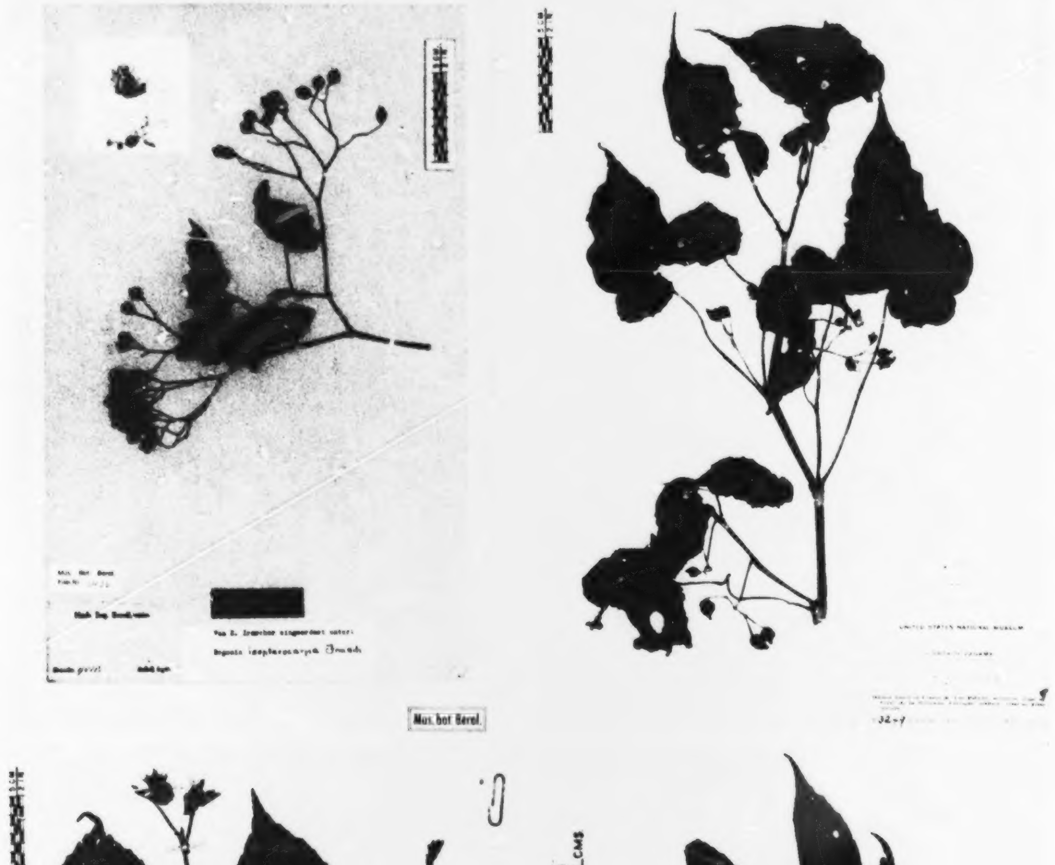
Mus. bot. Berol.
HERBARIO DEL MUSEO NACIONAL
FLORA DE BOLIVIA
legit Dr. Otto Buchtien
UNITED STATES NATIONAL MUSEUM
CMS
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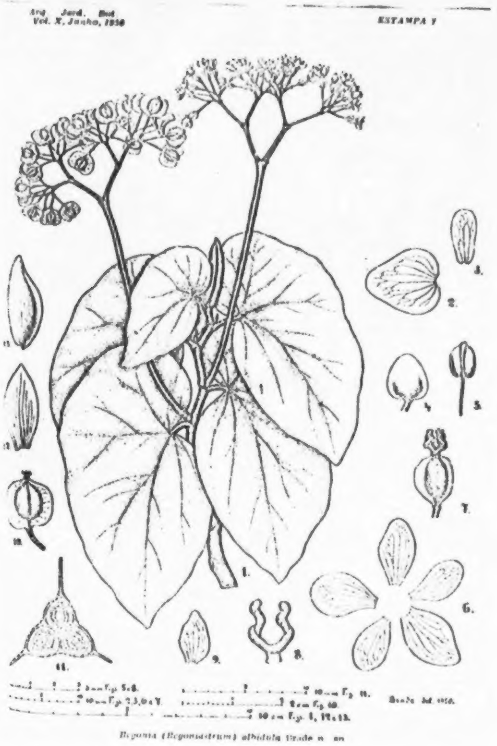
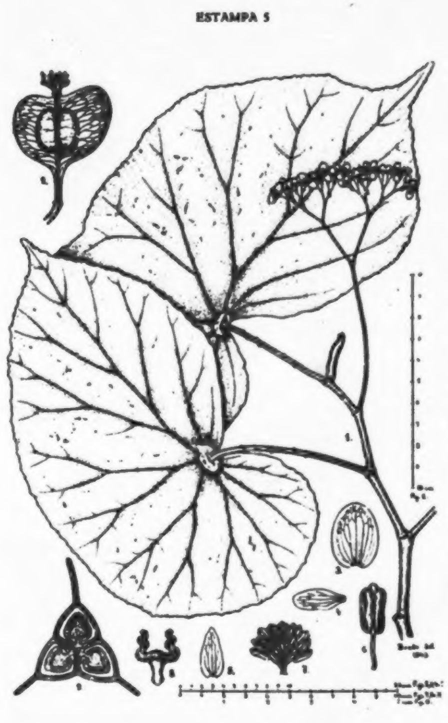
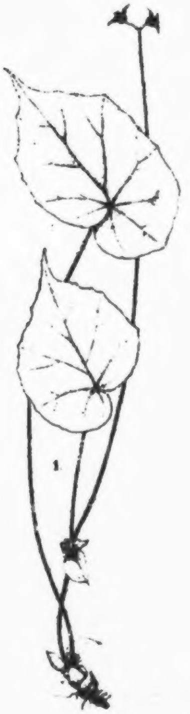
Begonia bradei Irmsch.
Det. E. Irmscher, 1950, ex litt.

29.23, *B. isopterocarpa;* 29.24, *B. udisilvestris;* 29.25, *B. buchtienii;* 29.26, *B. bradei.*

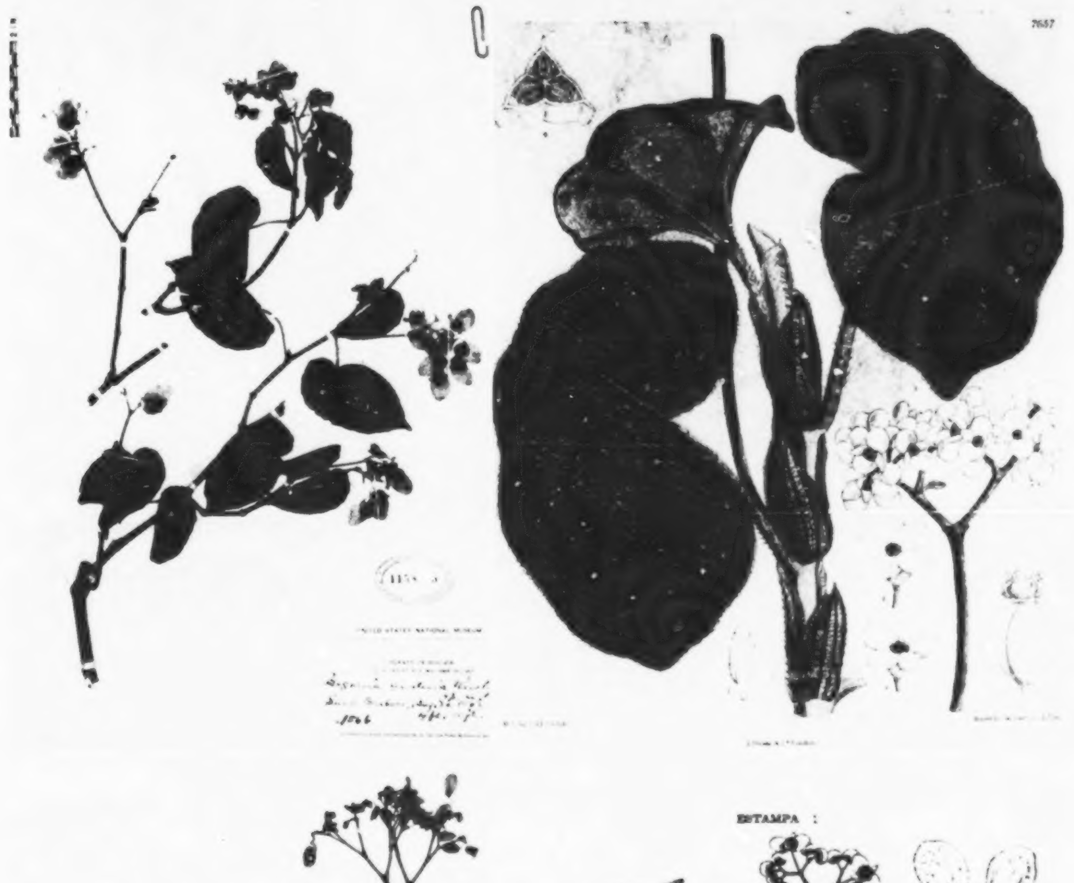

Arq. Jard. Bot.
Vol. X, Junho, 1950
ESTAMPA 7
Begonia (Begoniastrum) albidula Brade n. sp.


ESTAMPA 5
Bol. Mus. Nac. Rio n. ser. Bot. no. 1: 1944.

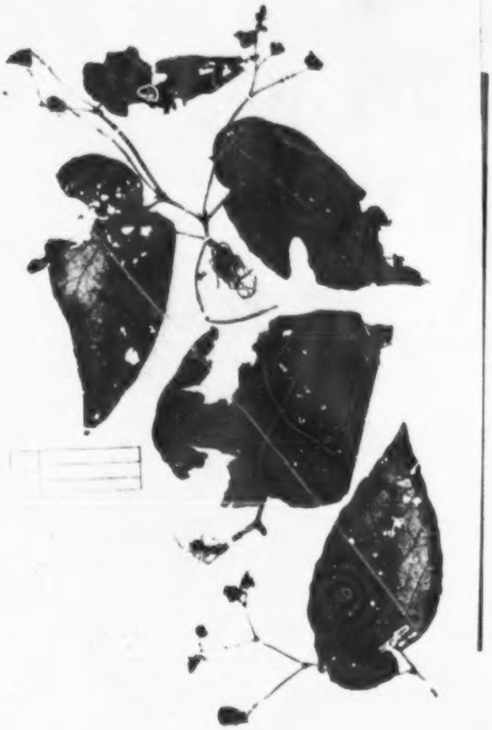


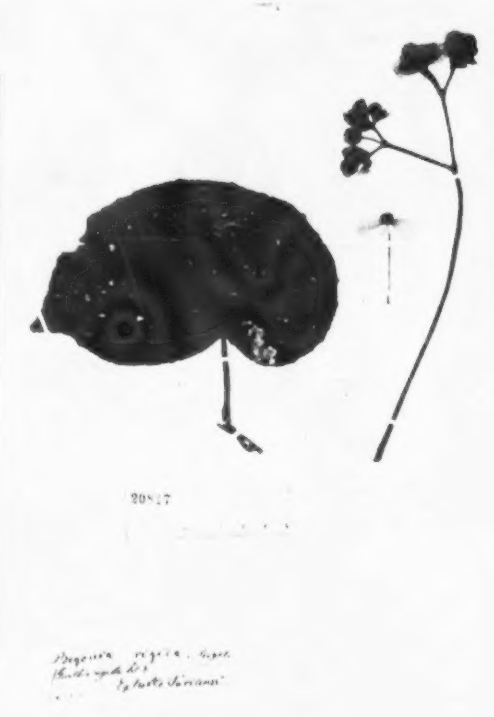
PLANTAS DO BRASIL

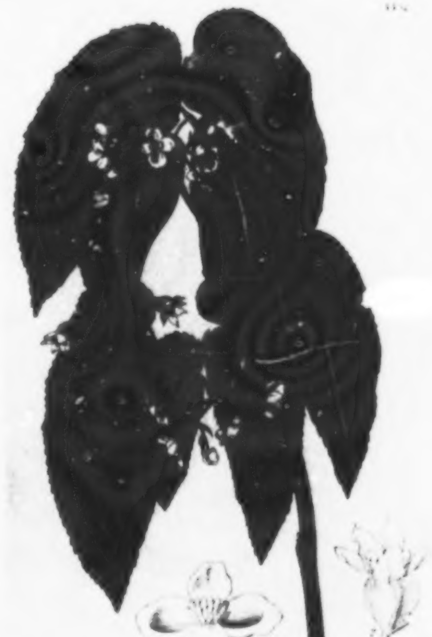
29.27, *B. albidula*; 29.28, *B. collaris*; 29.29, *B. solitudinis*; 29.30, *B. piresiana*.

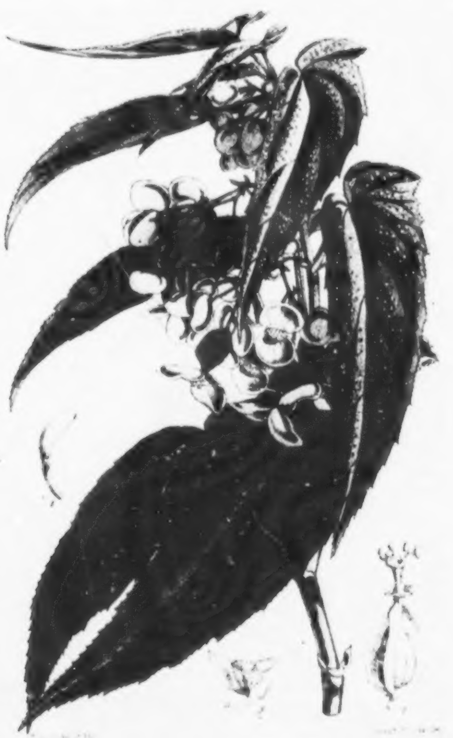

7657
UNITED STATES NATIONAL MUSEUM
ESTAMPA 1
Ex herbario horti Petropolitani
Begonia (Pritzelia) epipsila Brade n. sp.

29.31, *B. andina;* 29.32, *B. venosa;* 29.33, *B. tomentosa;* 29.34, *B. epipsila.*

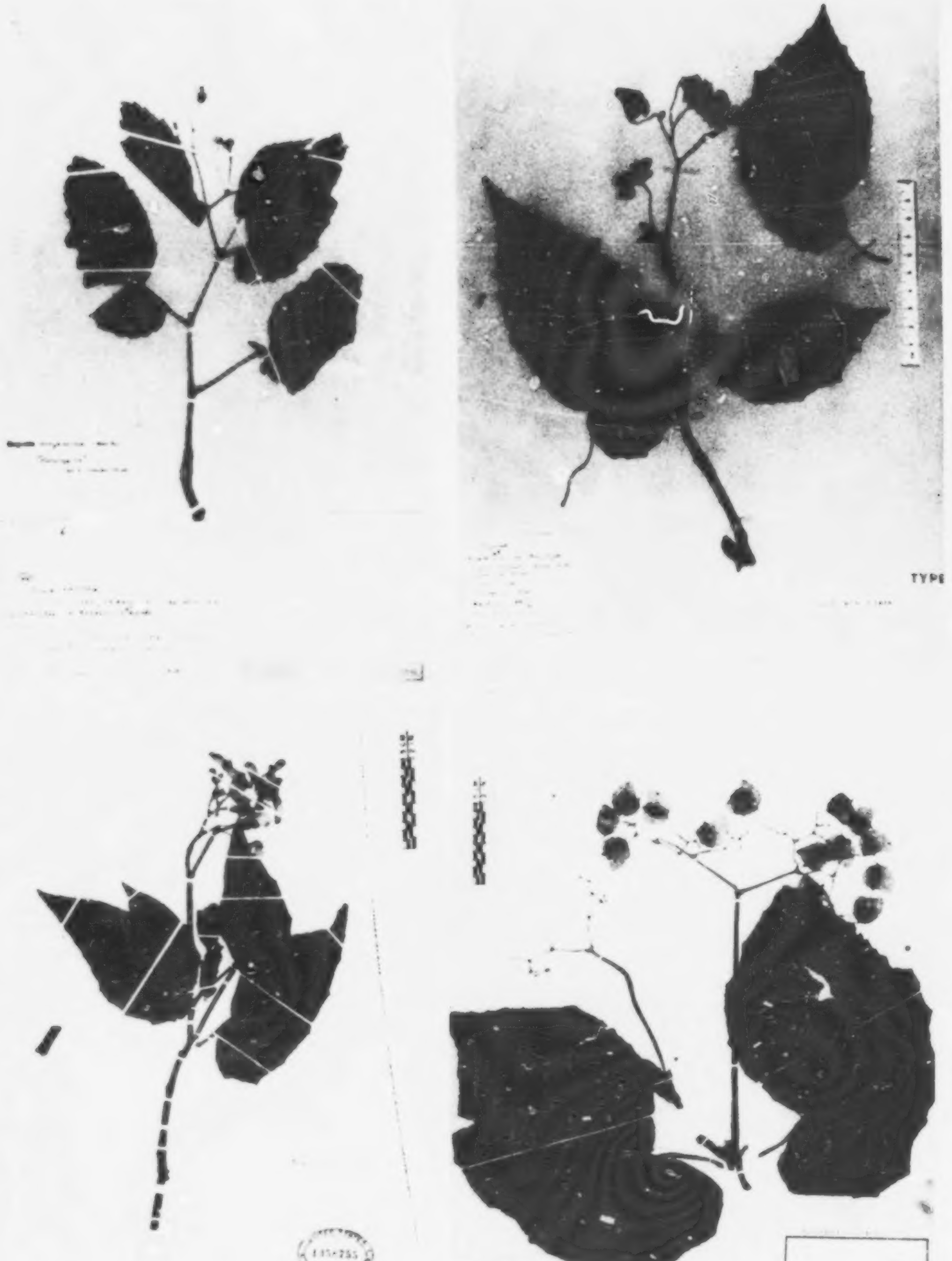




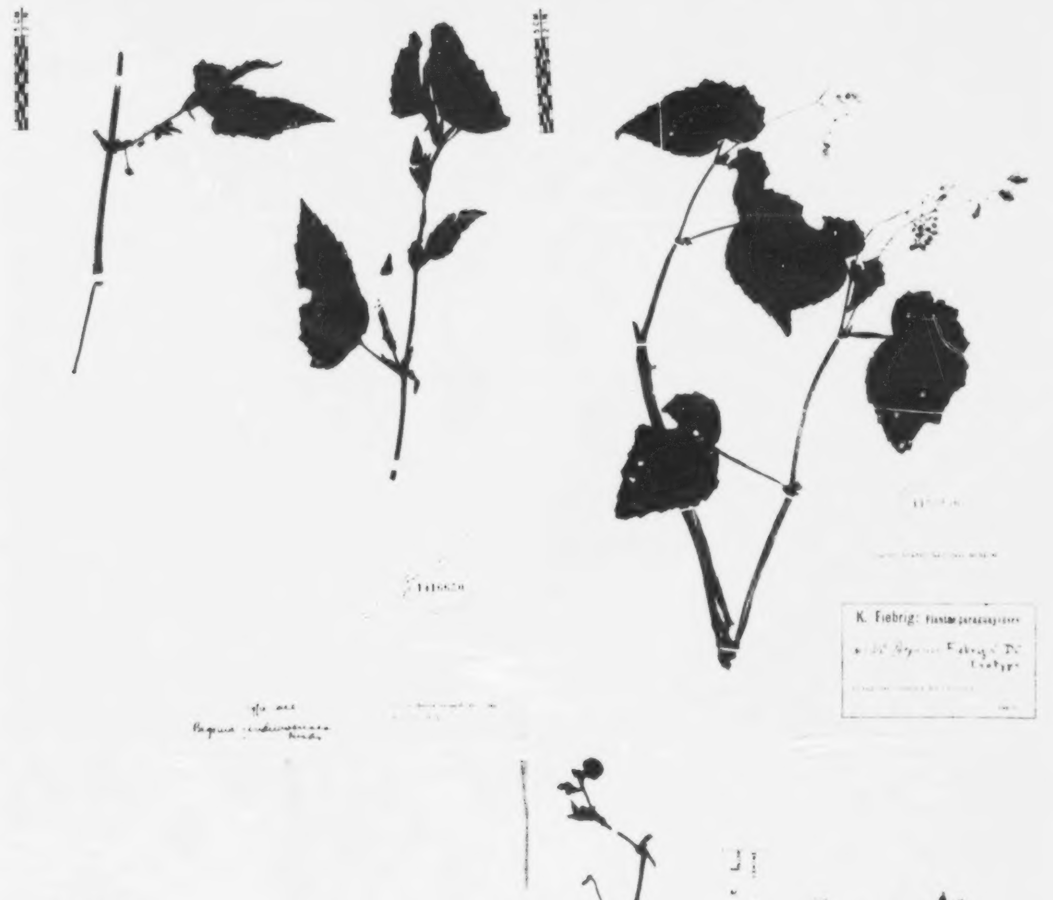




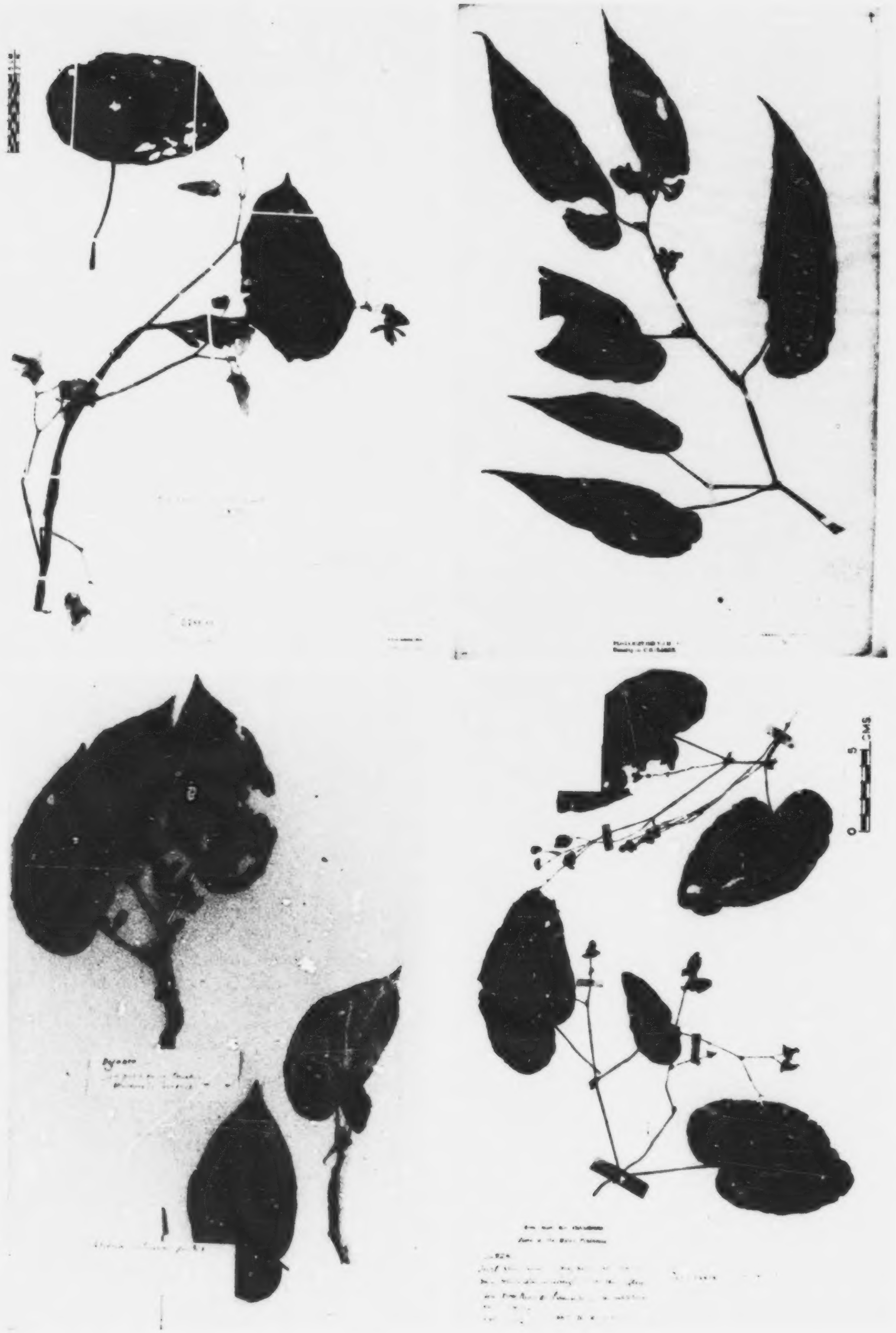
29.35, *B. socia*; 29.36, *B. rigida*; 30.1, *B. dietrichiana*; 30.2, *B. falcifolia*.



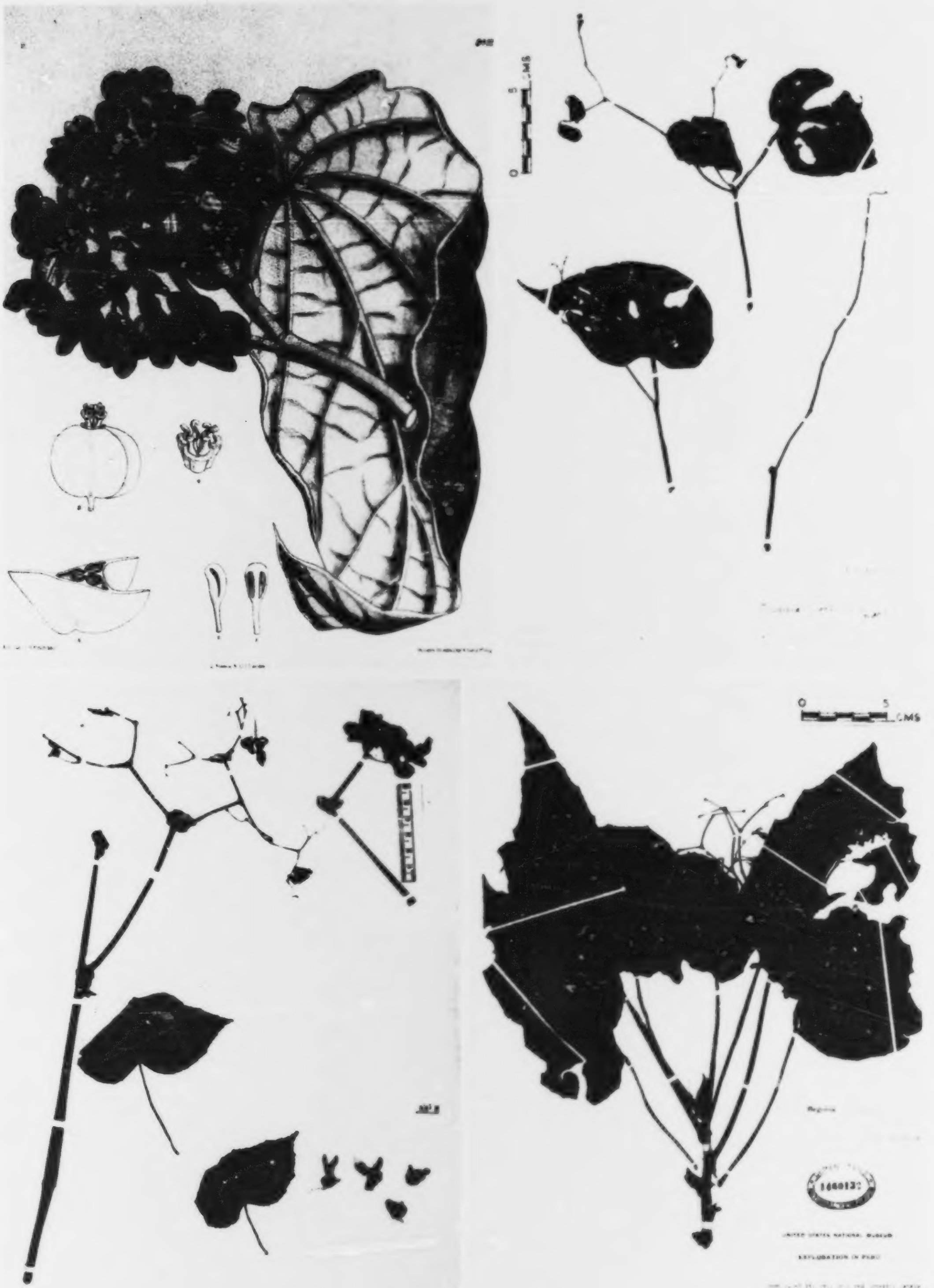
30.3, *B. angolensis;* 30.4, *B. majungaënsis;* 30.5, *B. lucifuga;* 30.6, *B. sylvatica.*


K. Fiebrig: Plantae paraguayenses
THE NEW YORK BOTANICAL GARDEN

30.7, *B. unduavensis;* 30.8, *B. fiebrigii;* 30.9, *B. candollei;* 30.10, *B. unilateralis.*



30.11, *B. stenotepala;* 30.12, *B. inflata;* 30.13, *B. salaziensis;* 30.14, *B. debilis.*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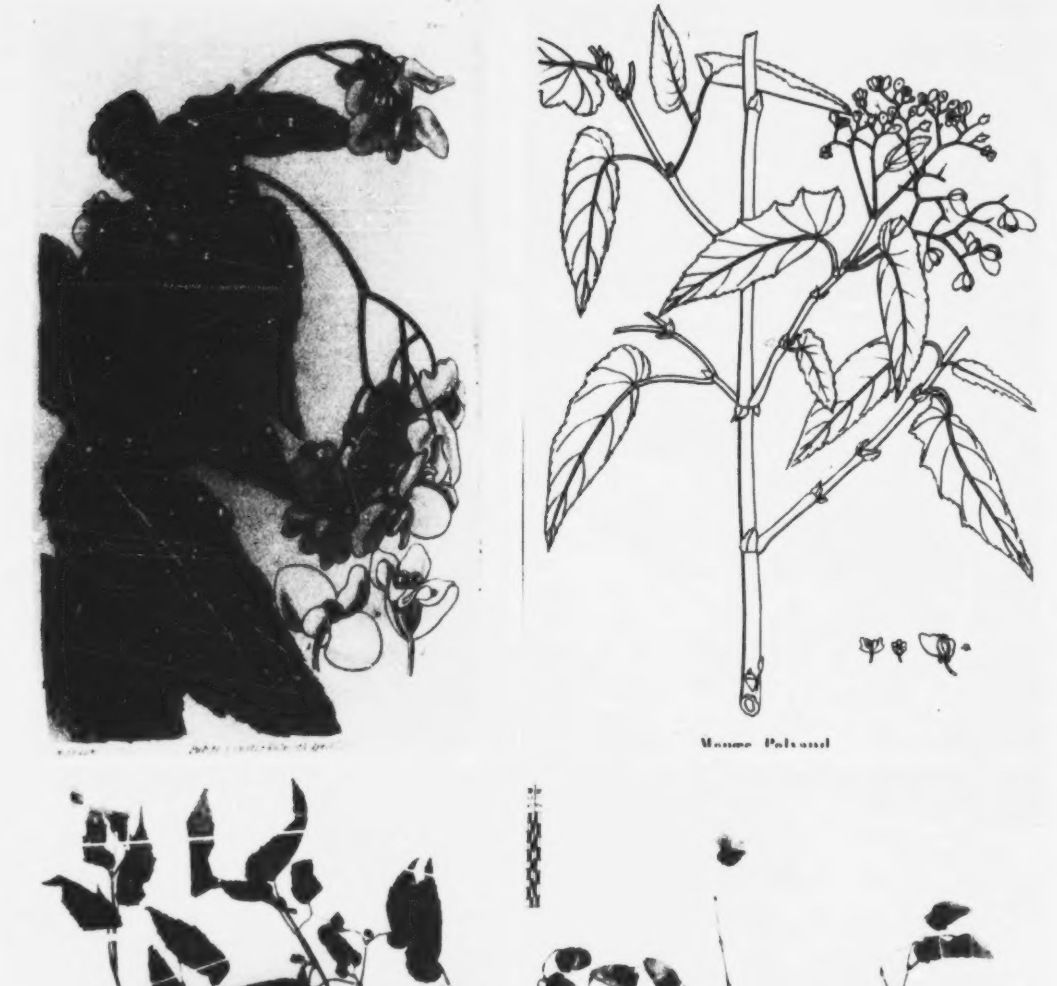
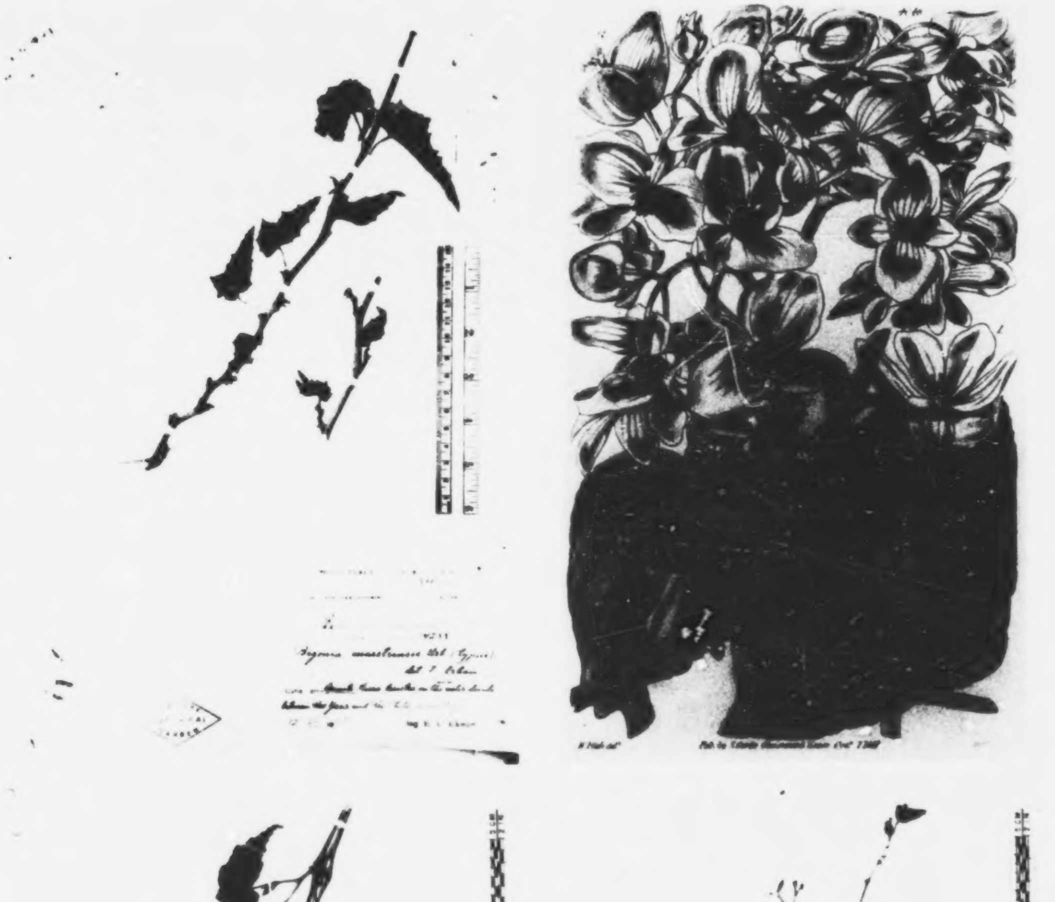
UNITED STATES NATIONAL MUSEUM
EXPLORATION IN PERU

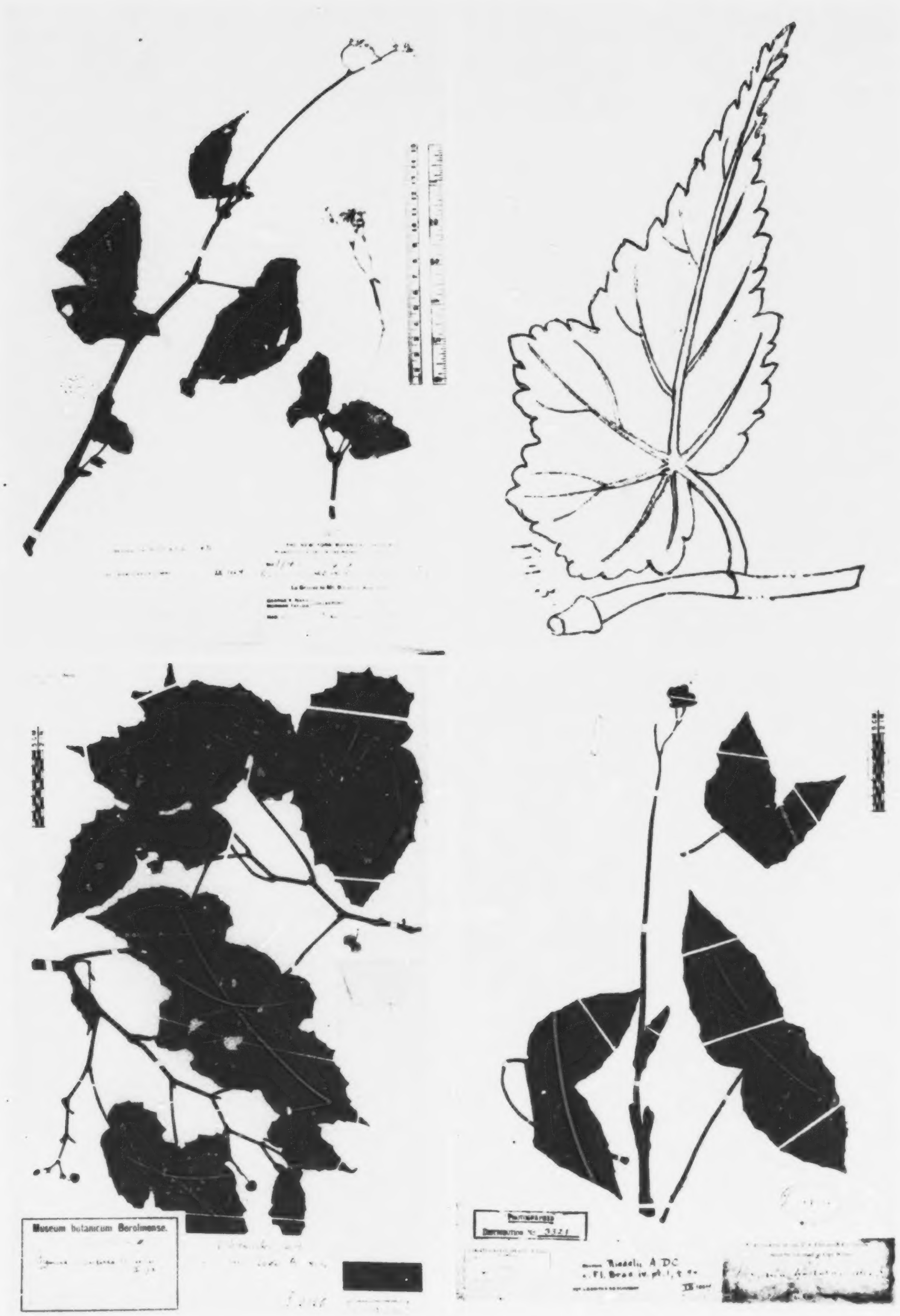
30.15, *B. dichroa;* 30.16, *B. tenericaulis;* 30.17, *B. bridgesii;* 30.18, *B. arrogans.*


Urban
Berol

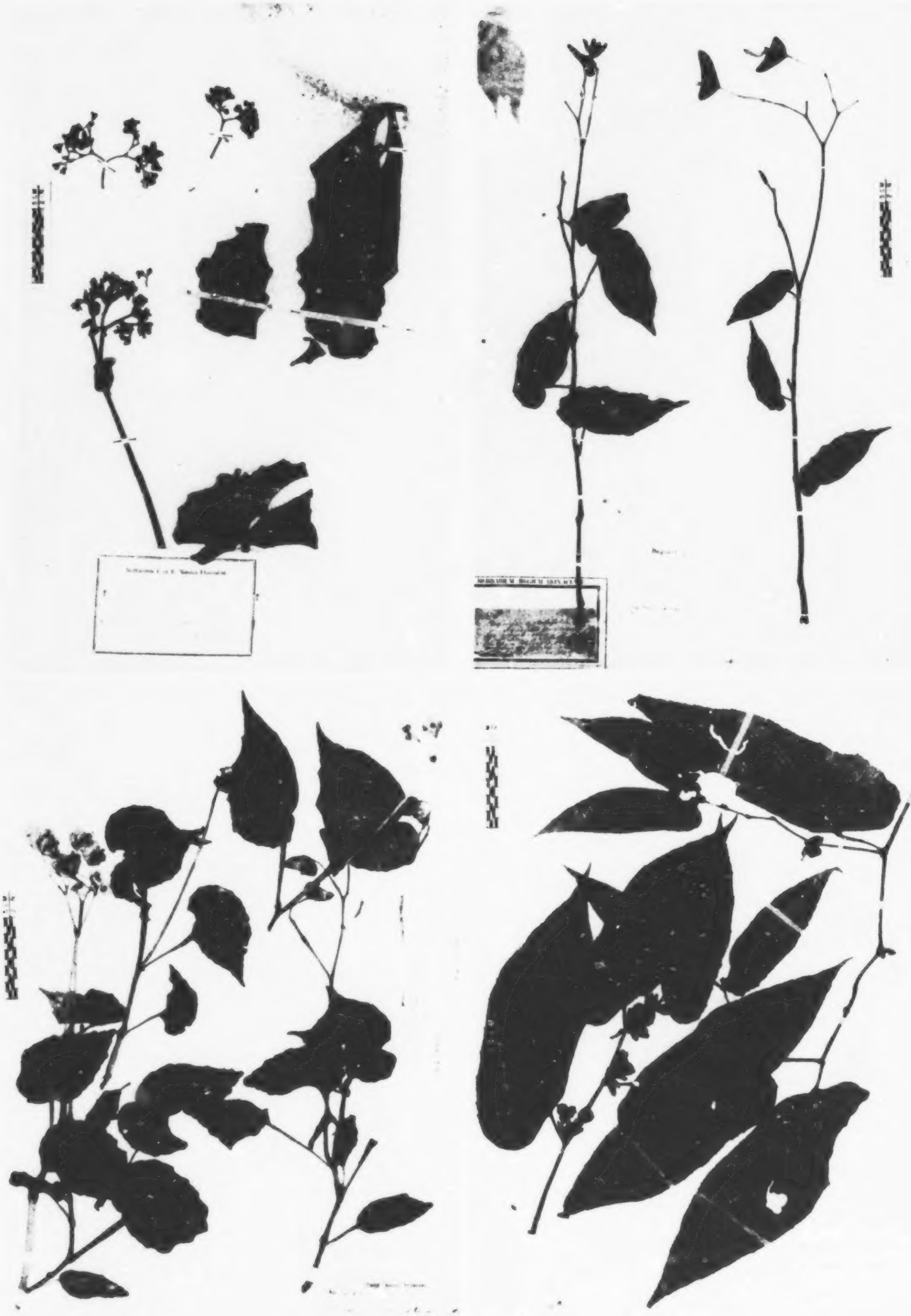
30.19, *B. incarnata;* 30.20, *B. angulata;* 30.21, *B. stolzii;* 30.22, *B. abbottii.*



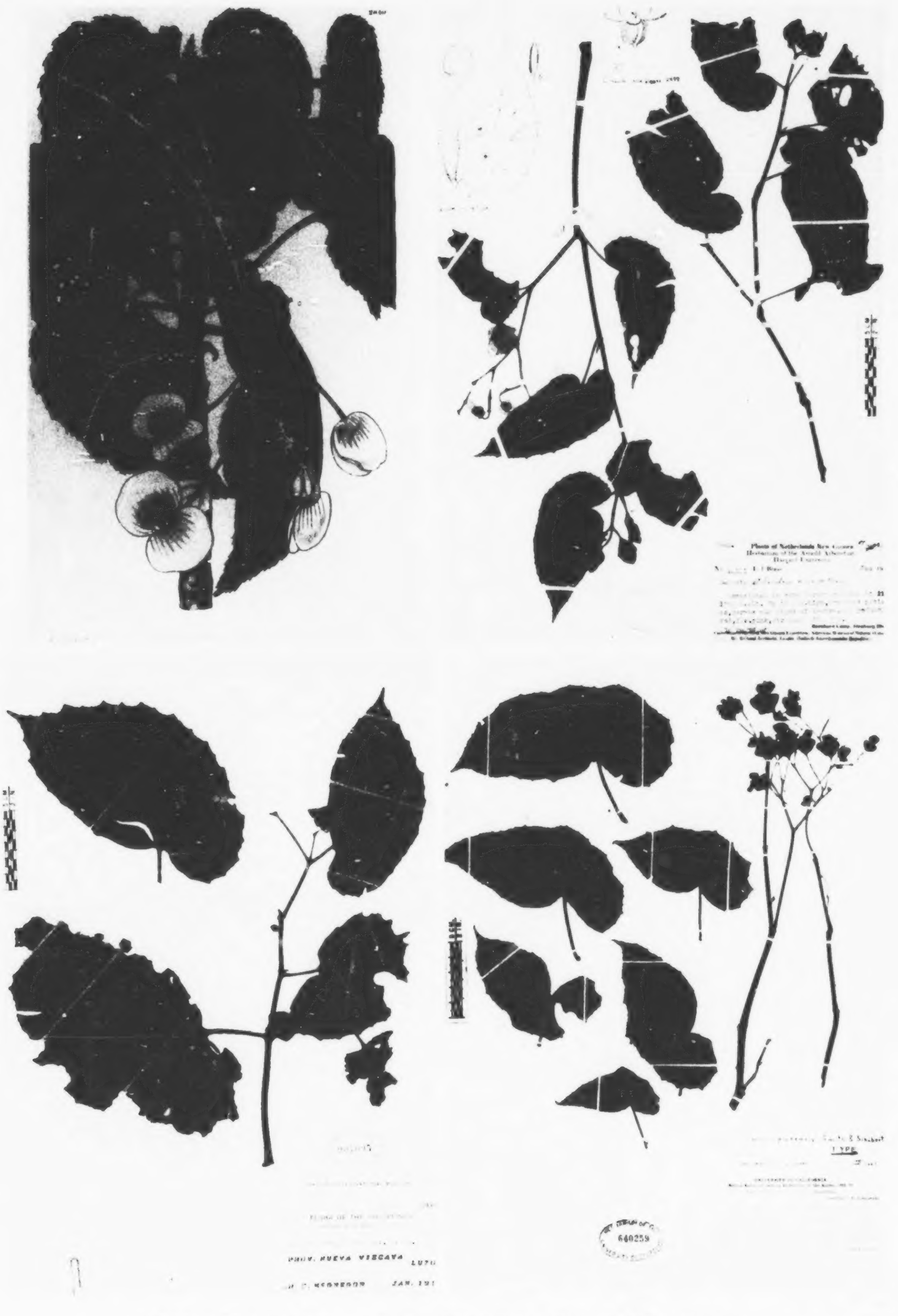
30.23, *B. maestrensis;* 30.24, *B. minor;* 30.25, *B. notiophila;* 30.26, *B. brachypoda.*


Museum botanicum Berolinense.
PHOTOGRAPHED
Distribution No 3321
Riedelii A. DC
Fl. Bras

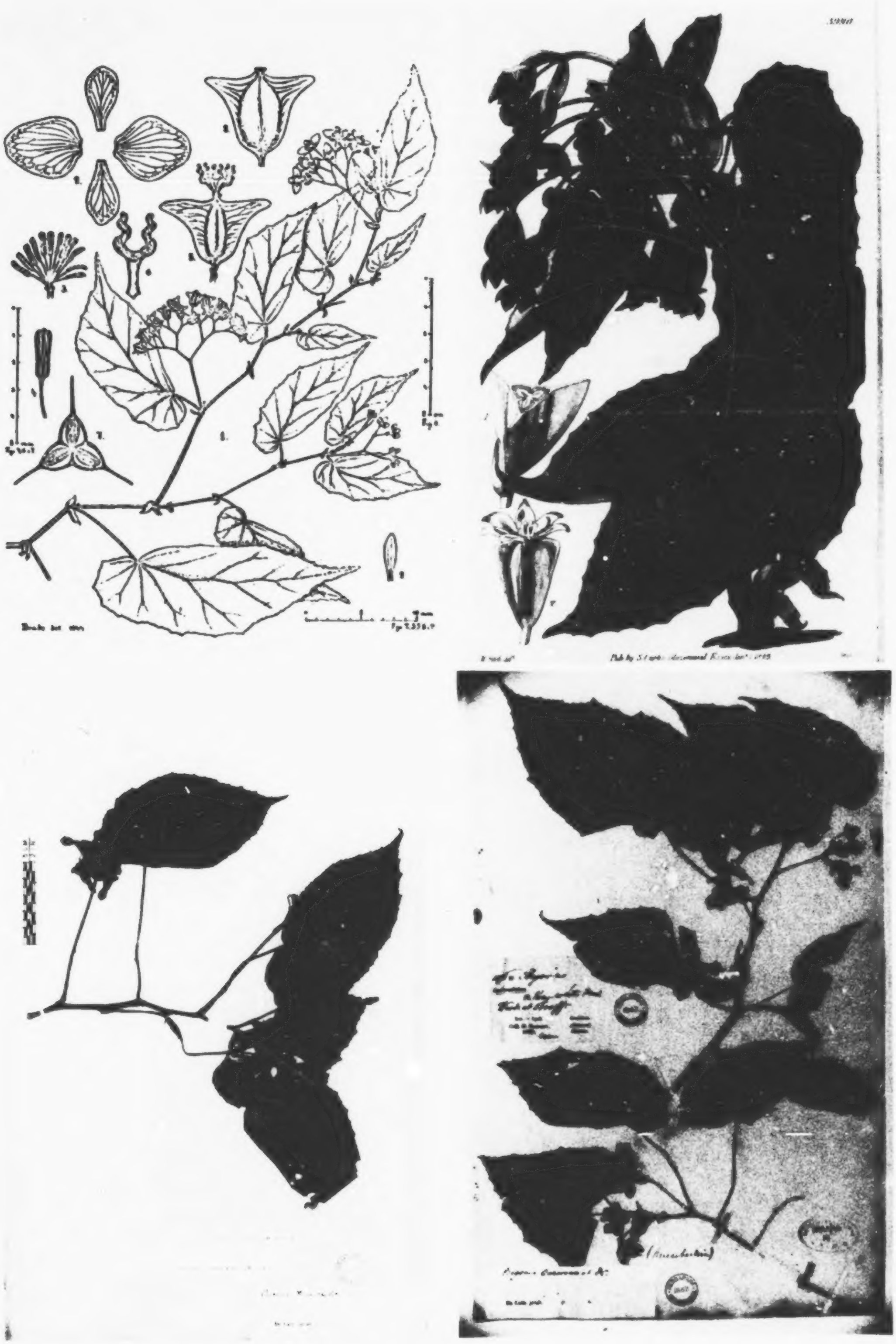
30.27, *B. bolleana;* 30.28, *B. plumieri;* 30.29, *B. imperfecta;* 30.30, *B. riedelii.*



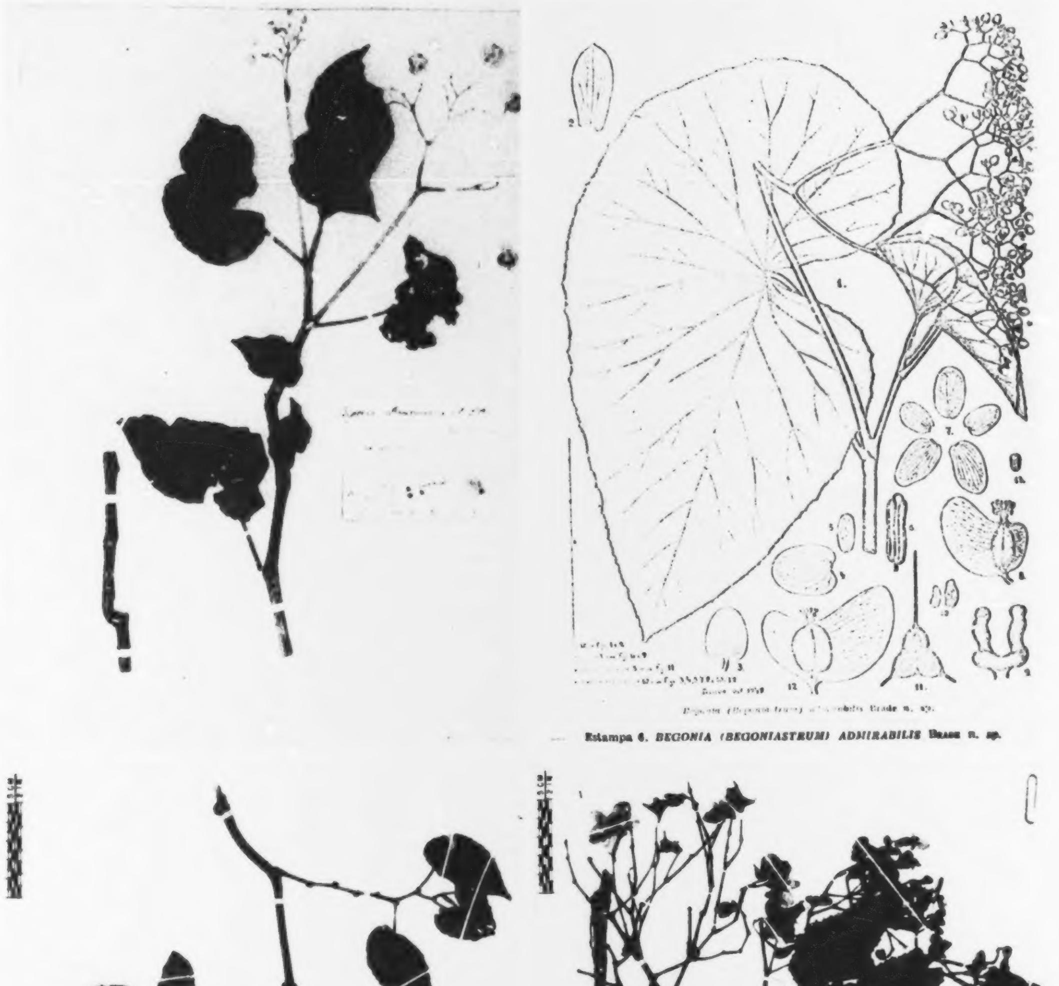
30.31, *B. angularis;* 30.32, *B. jamaicensis;* 30.33, *B. wrightiana;* 30.34, *B. aptera.*


PROV. NUEVA VIZCAYA
640259
TYPE

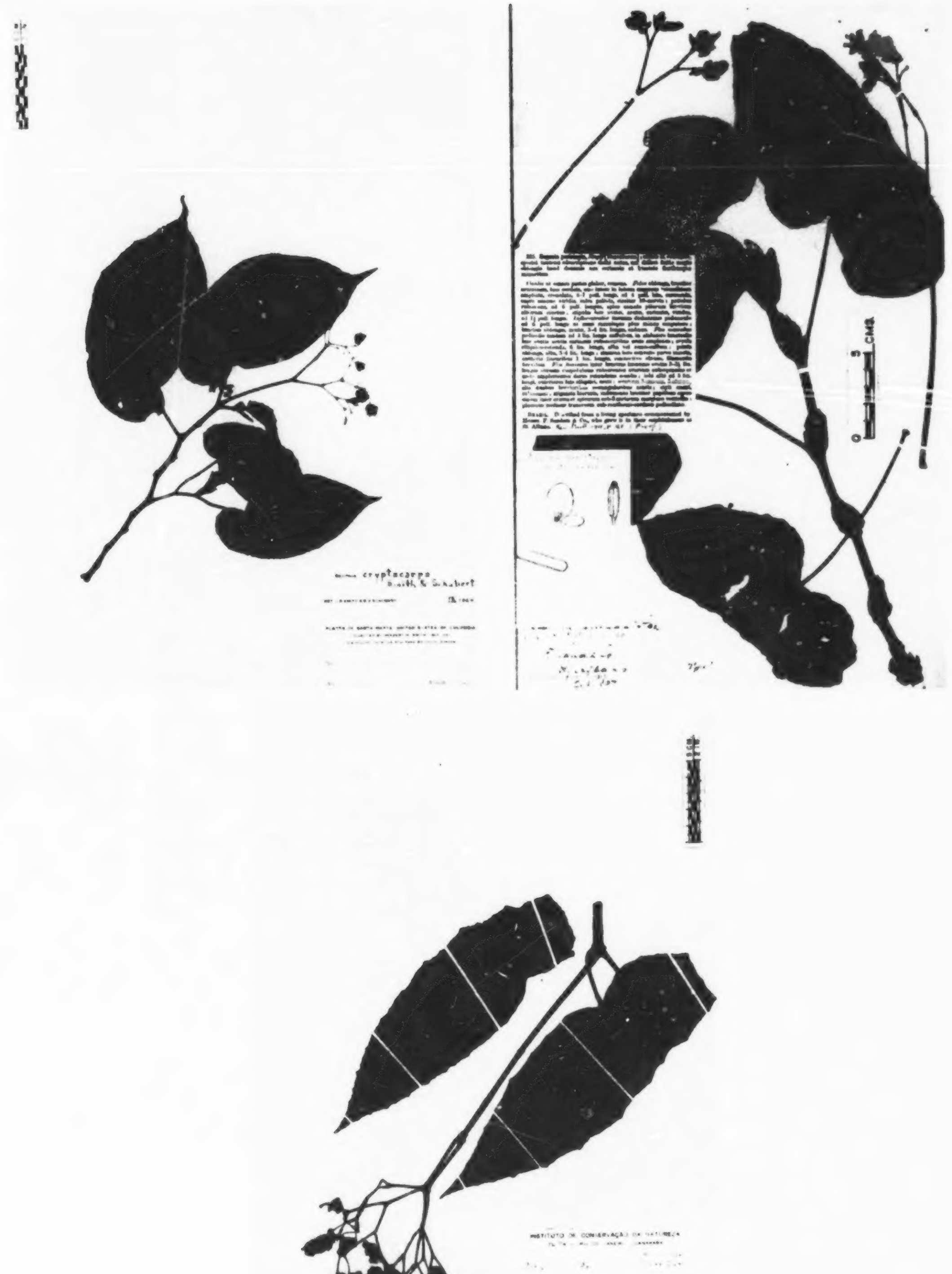
30.35, *B. dipetala;* 30.36, *B. stilandra;* 30.37, *B. platyphylla;* 30.38, *B. piurensis.*



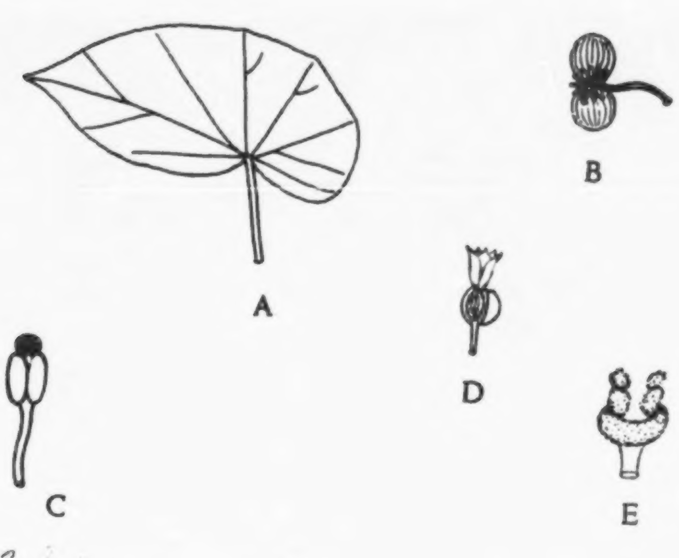
30.39, *B. catharinensis;* 30.40, *B. coccinea;* 30.41, *B. trispathulata;* 30.42, *B. oaxacana.*

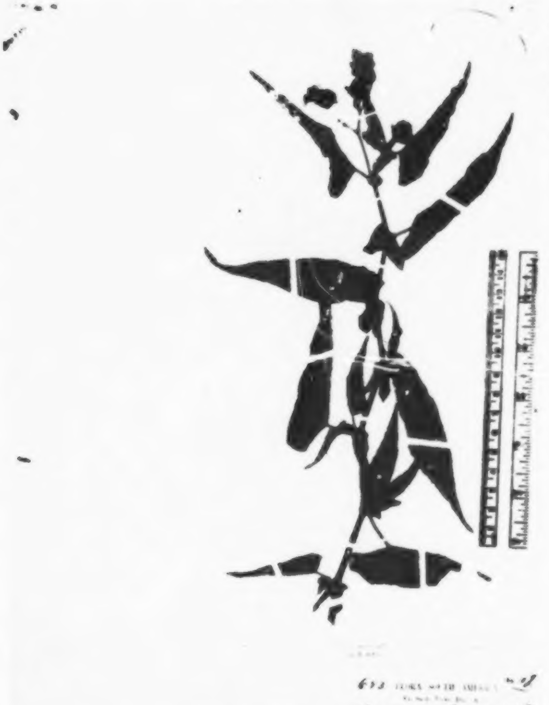

Estampa 6. BEGONIA (BEGONIASTRUM) ADMIRABILIS Brade n. sp.
Ministerio de Agricultura y Cria
HERBARIO NACIONAL DE VENEZUELA
UNITED STATES
2598267 A
NATIONAL HERBARIUM
Begonia cornuta Smith & Schubert
TYPE

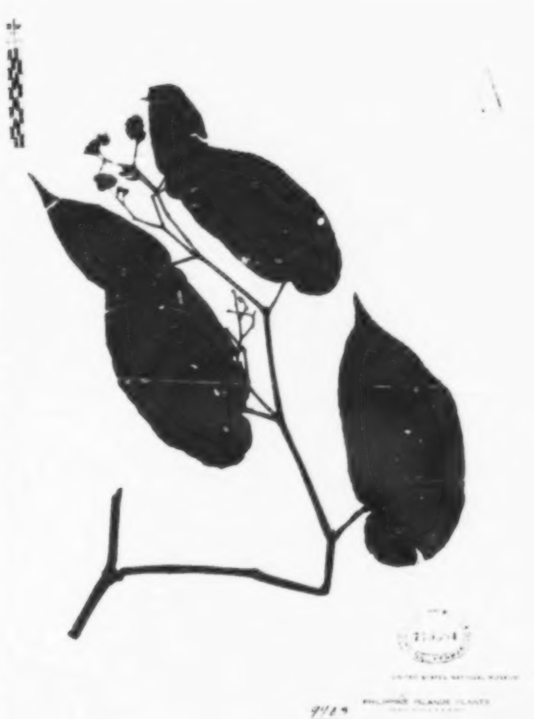
30.43, *B. altoperuviana;* 30.44, *B. admirabilis;* 30.45, *B. lipolepis;* 30.46, *B. cornuta.*


cryptocarpa
Smith & Schubert
INSTITUTO DE CONSERVAÇÃO DA NATUREZA
UNITED STATES
277555C
NATIONAL HERBARIUM

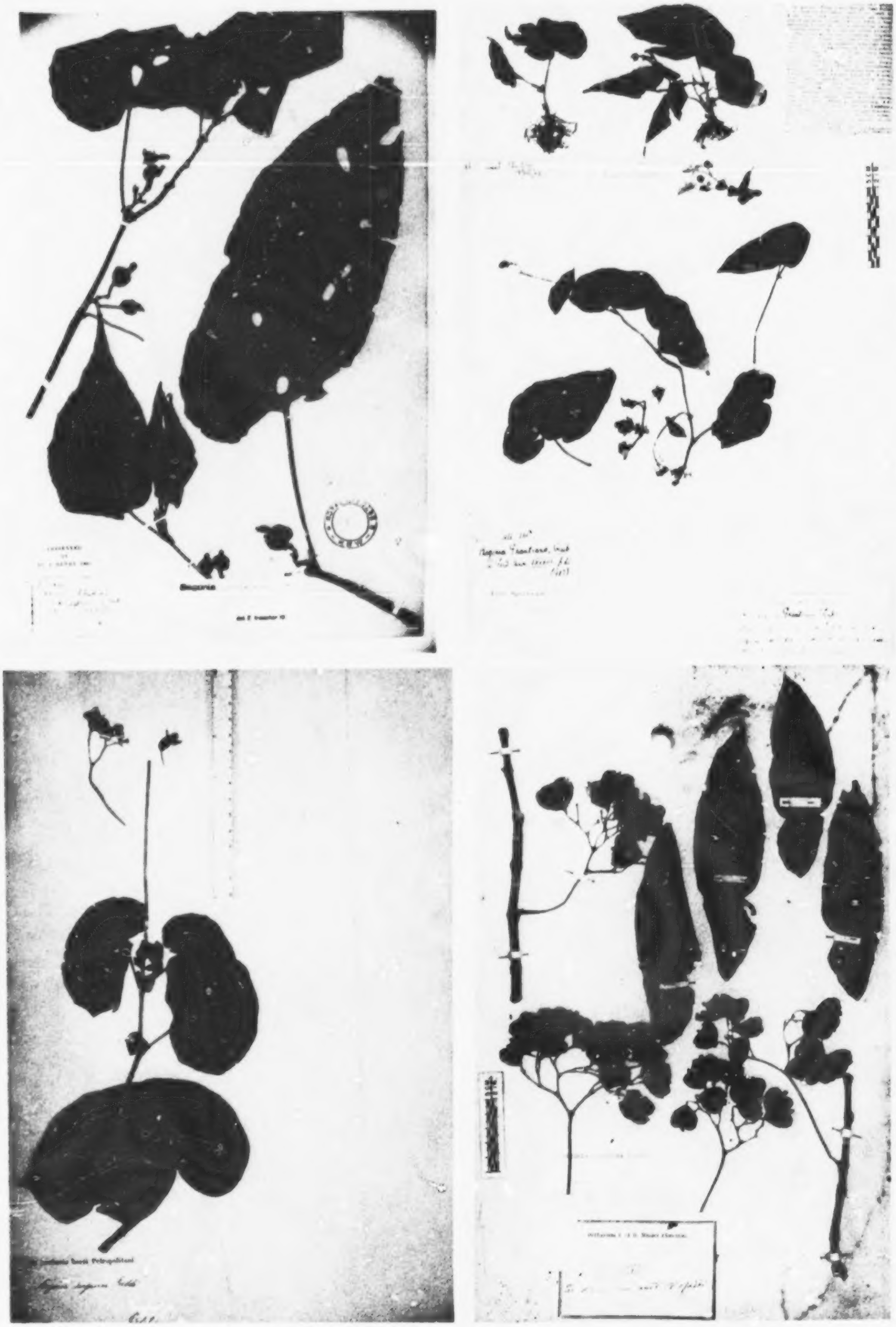
30.47, *B. cryptocarpa;* 30.48, *B. peristegia;* 30.49, *B. corallina.*



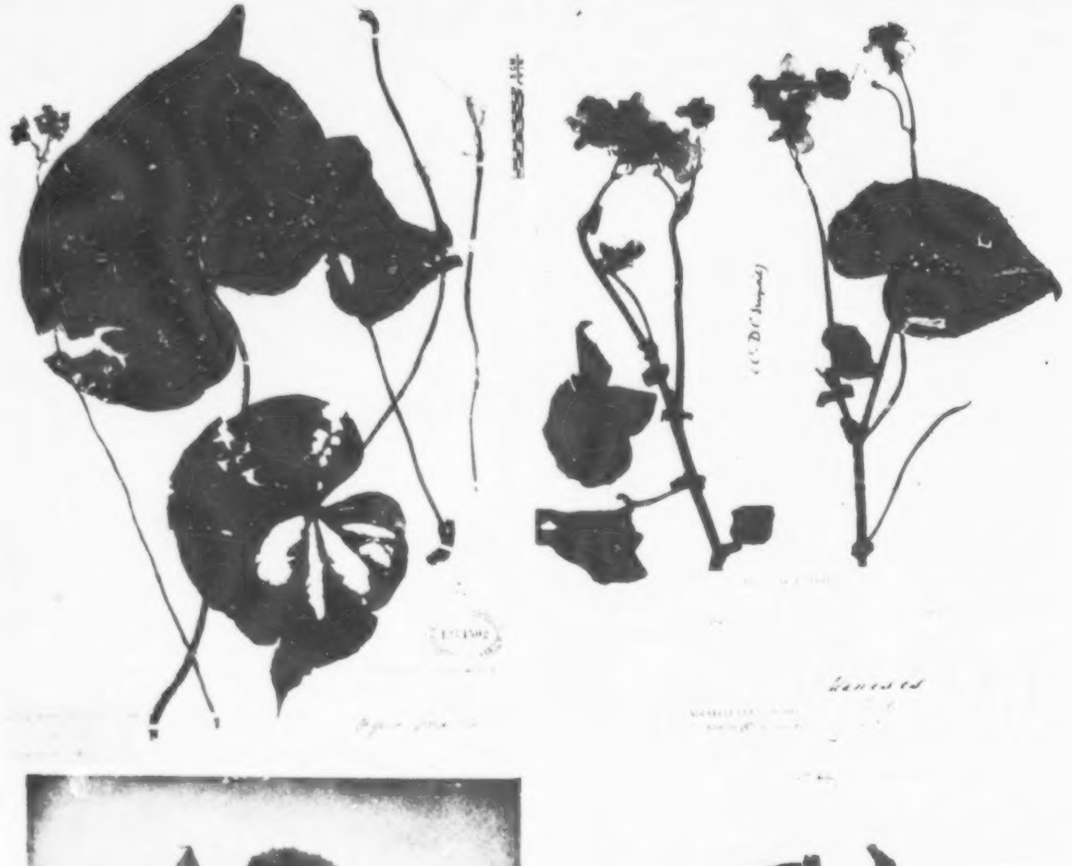

Begonia subcaudata


PHILIPPINE ISLANDS PLANTS
Begonia negrosensis

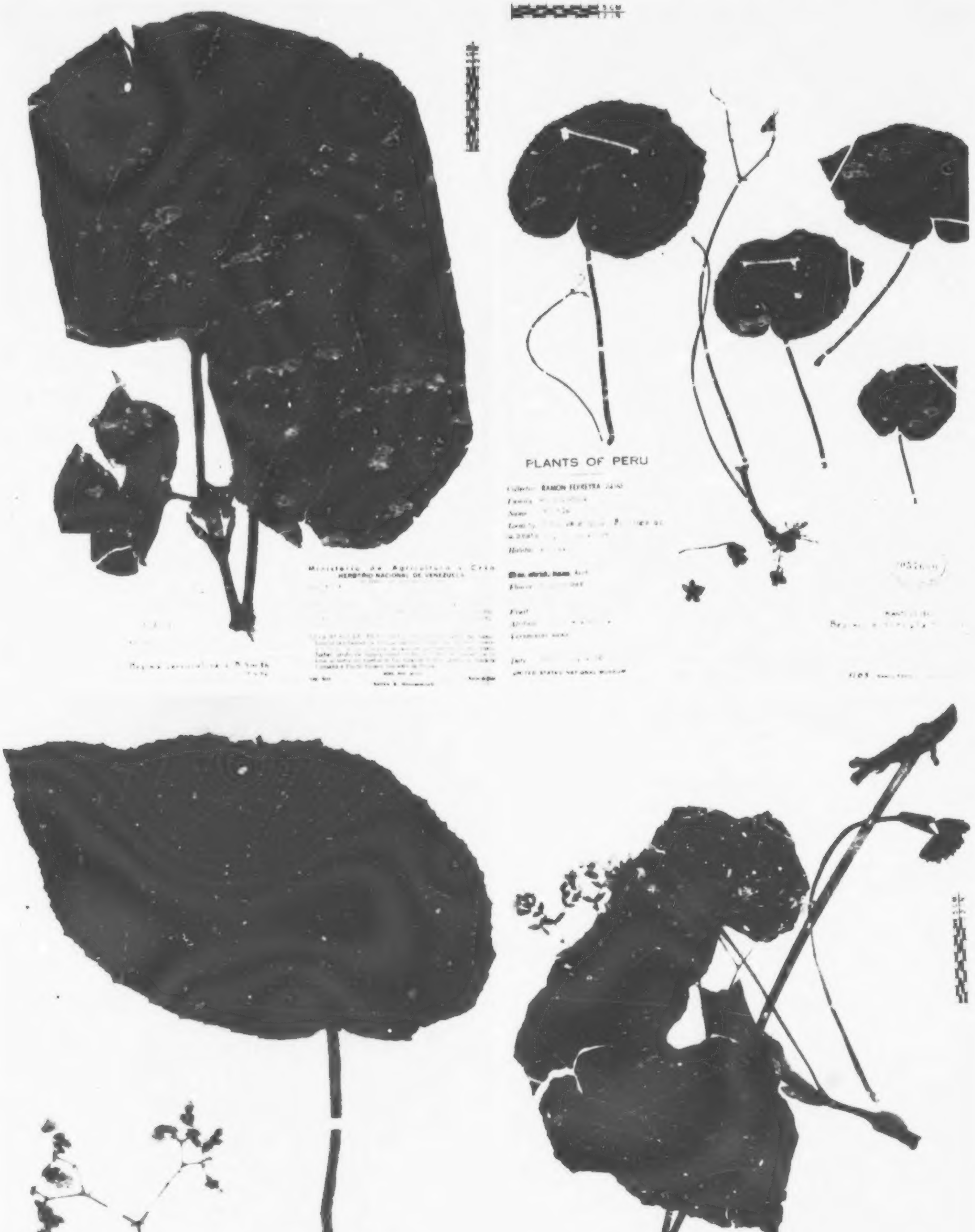
30.50, *B. laxa;* 30.51, *B. subcaudata;* 30.52, *B. negrosensis.*



30.53, *B. crassirostris;* 30.54, *B. gratiana;* 30.55, *B. sanguinea;* 30.56, *B. maculata.*



31.1, *B. sychnantha;* 31.2, *B. pastoensis;* 31.3, *B. viscida;* 31.4, *B. exalata.*


Ministerio de Agricultura y Cria
HERBARIO NACIONAL DE VENEZUELA
PLANTS OF PERU
Collector RAMON FERREYRA
UNITED STATES NATIONAL MUSEUM
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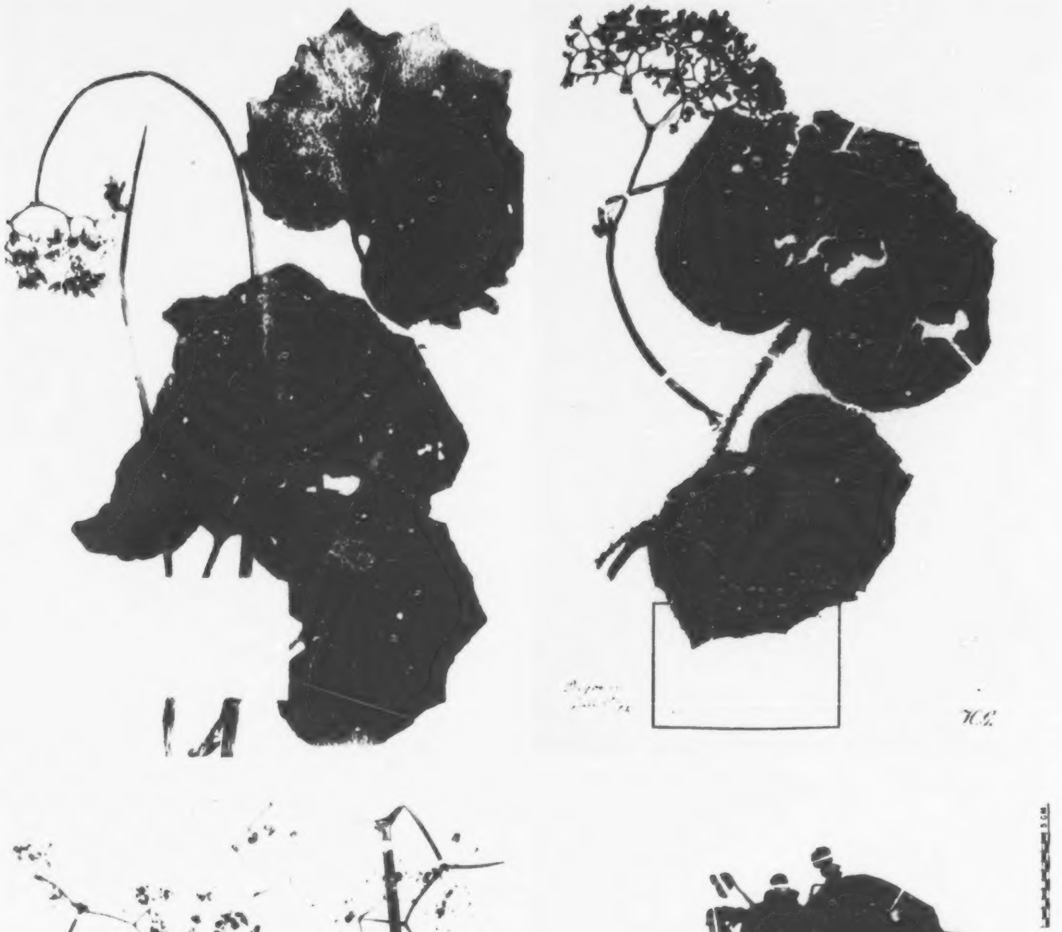
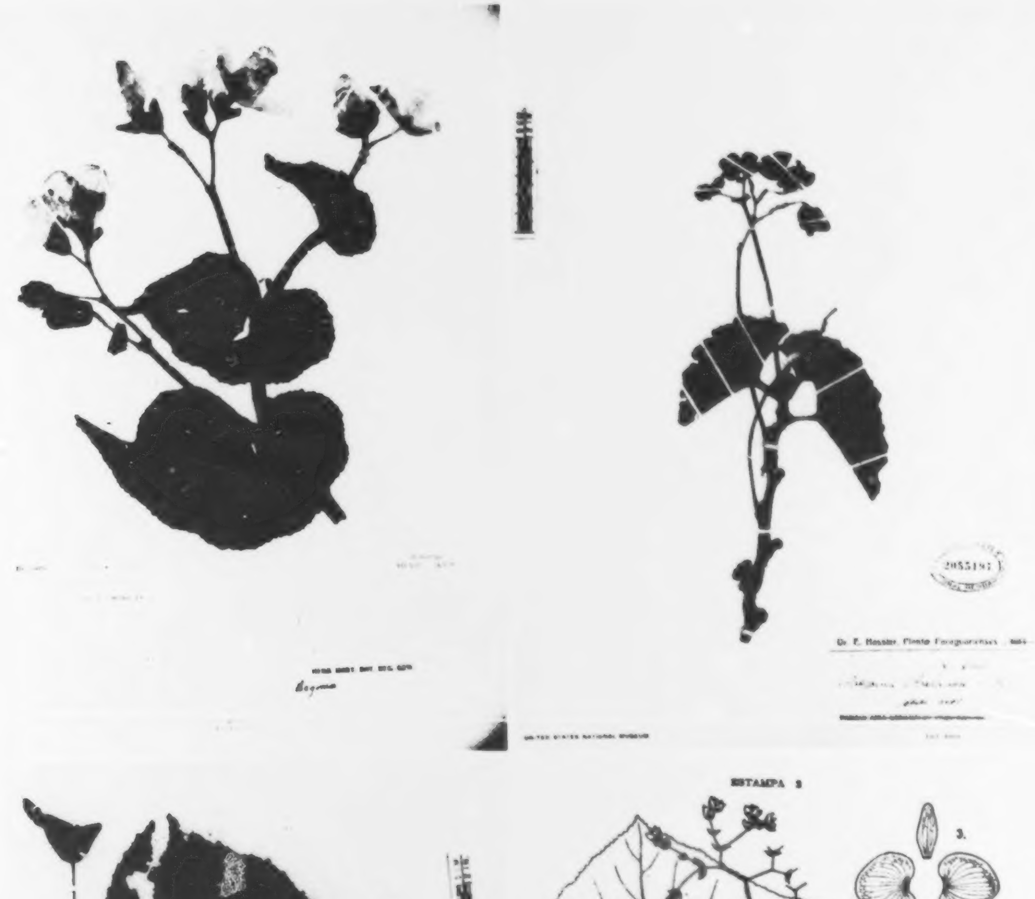
31.5, *B. verruculosa;* 31.6, *B. bifurcata;* 31.7, *B. scabrida;* 31.8, *B. boraceiensis.*



31.9, *B. neocomensium;* 31.10, *B. palecta;* 31.11, *B. dichotoma;* 31.12, *B. rockii.*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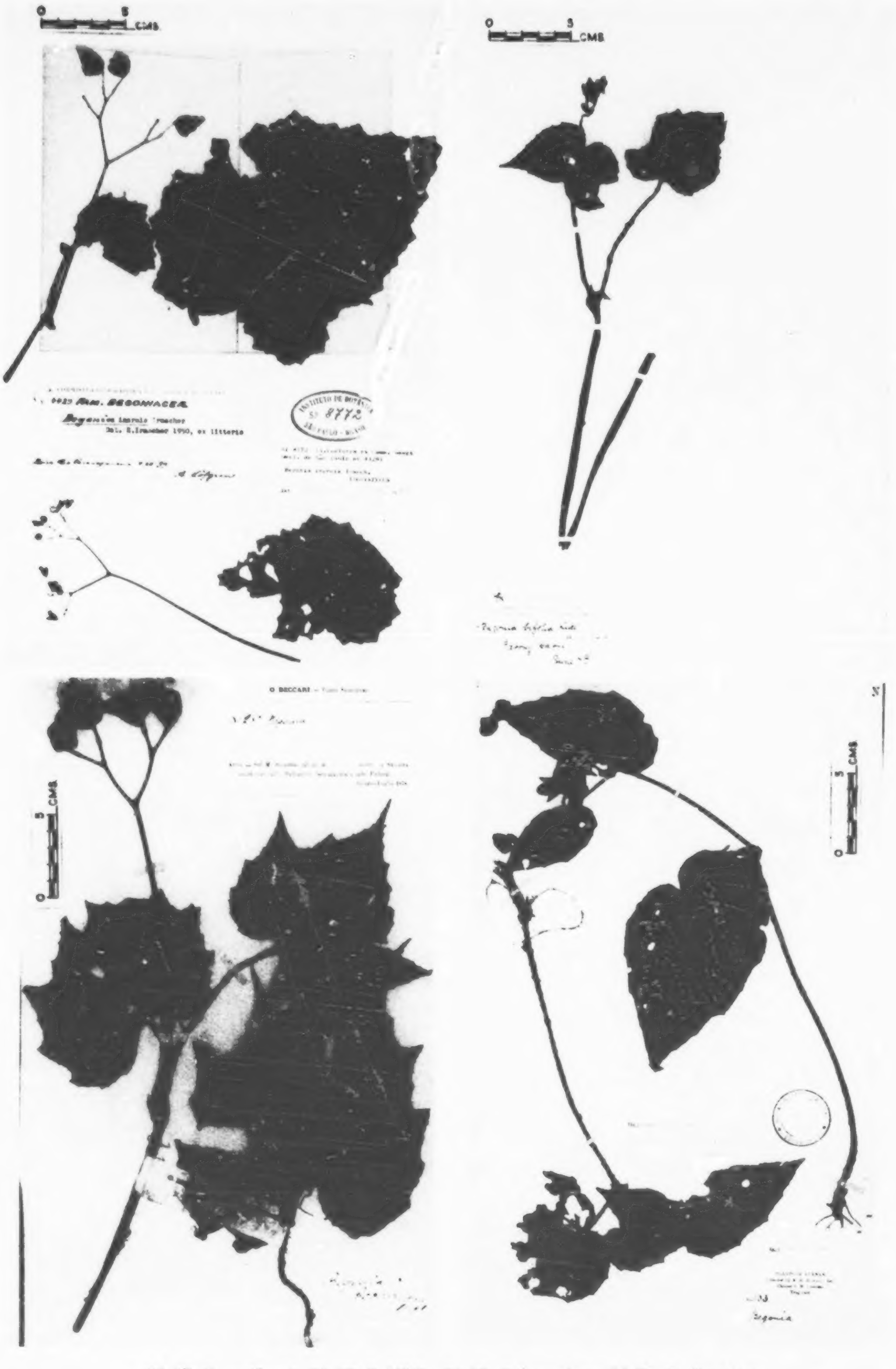
Dr. E. Hassler, Plantae Paraguarienses
UNITED STATES NATIONAL MUSEUM
ESTAMPA 3
Begonia (Pritzelia) longibarbata Brade n. sp.
Begonia keniensis

31.13, *B. nyassensis;* 31.14, *B. balansae;* 31.15, *B. keniensis;* 31.16, *B. longibarbata.*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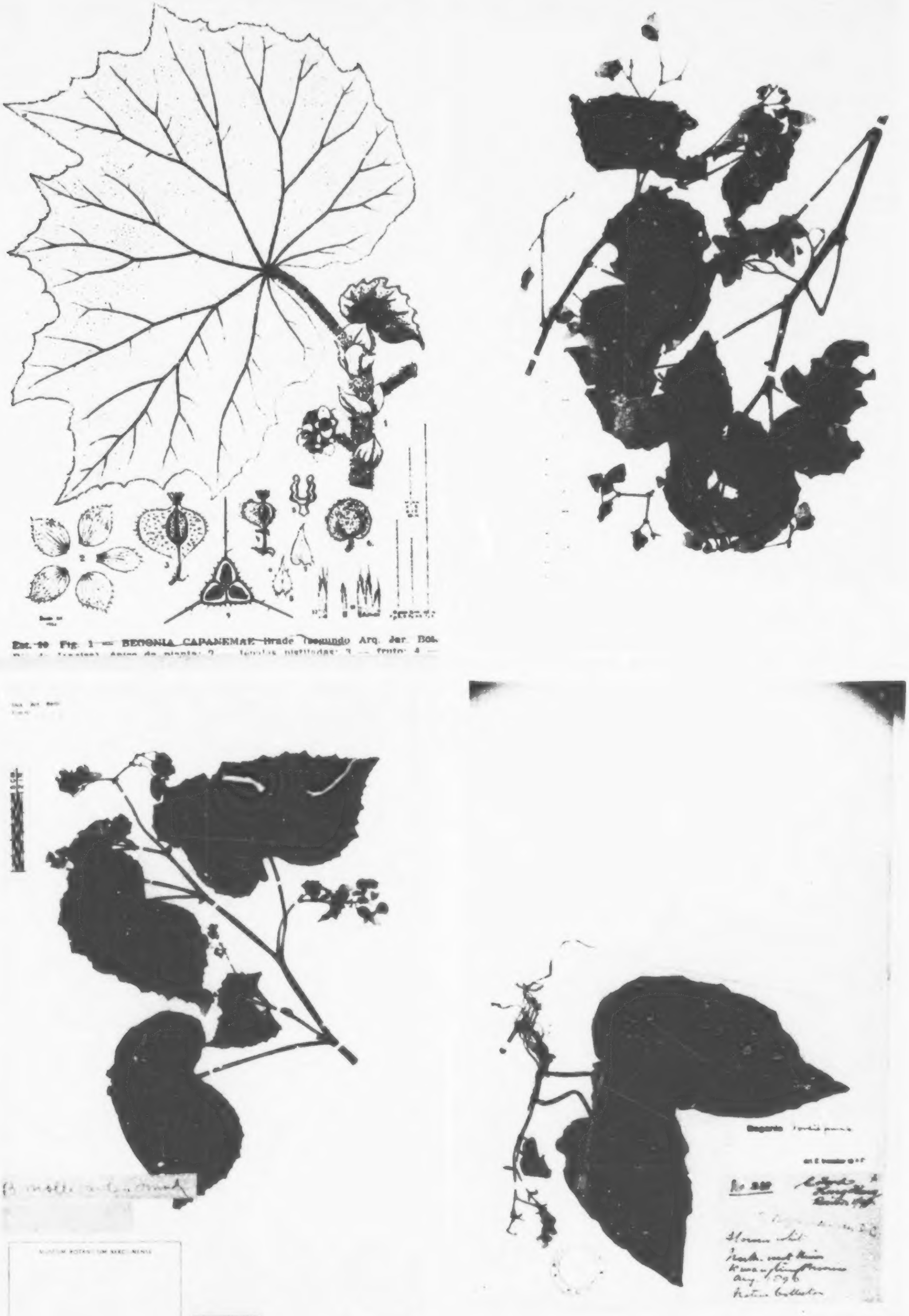
INSTITUTO DE BOTÂNICA
SP 8772
SÃO PAULO - BRASIL
O BECCARI
Begonia

31.17, *B. reniformis;* 31.18, *B. bifolia;* 31.19, *B. beccariana;* 31.20, *B. discrepans.*


Est. 10 Fig. 1 — BEGONIA CAPANEMAE Brade (segundo Arq. Jar. Bot.
Mus. bot. Berol.
Begonia fordii

31.21, *B. capanemae;* 31.22, *B. per-dusenii;* 31.23, *B. mollicaulis;* 31.24, *B. fordii.*

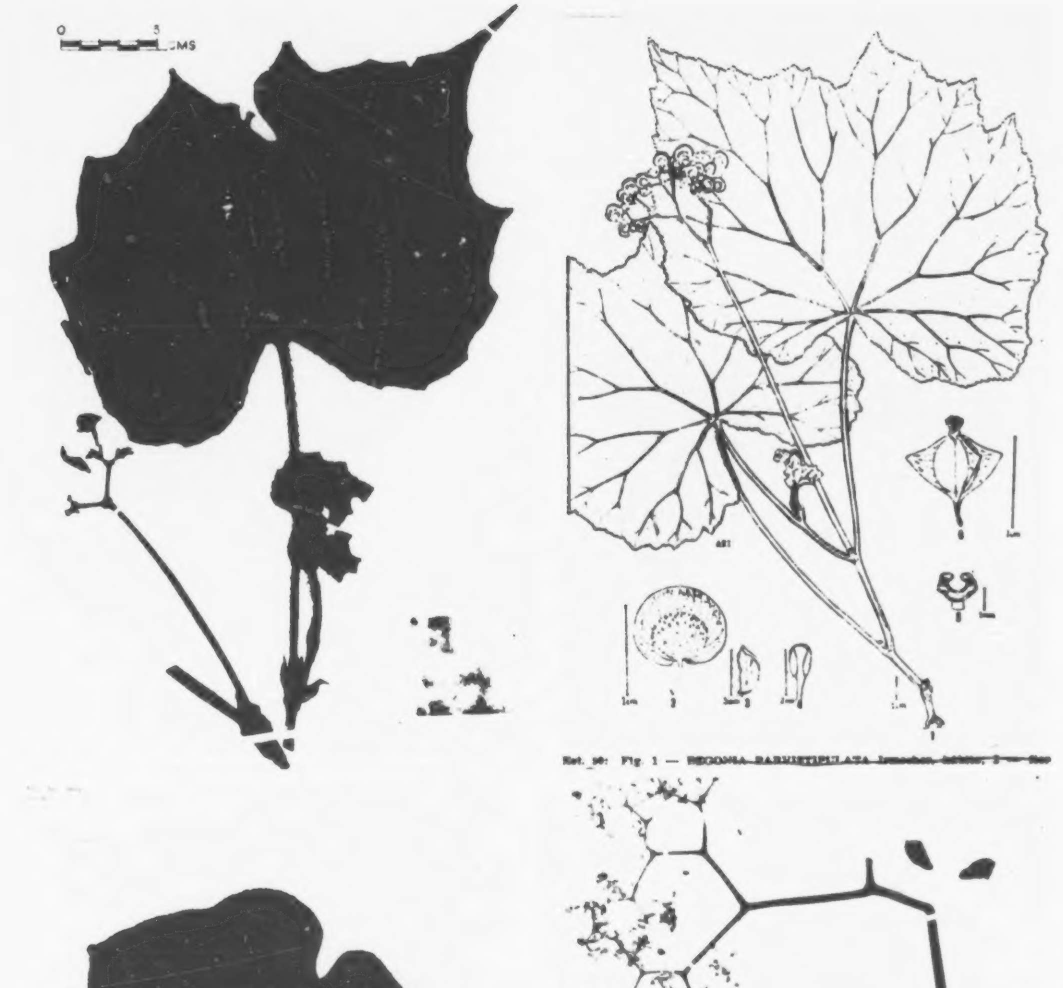

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Fig. 1 — BEGONIA PARVISTIPULATA
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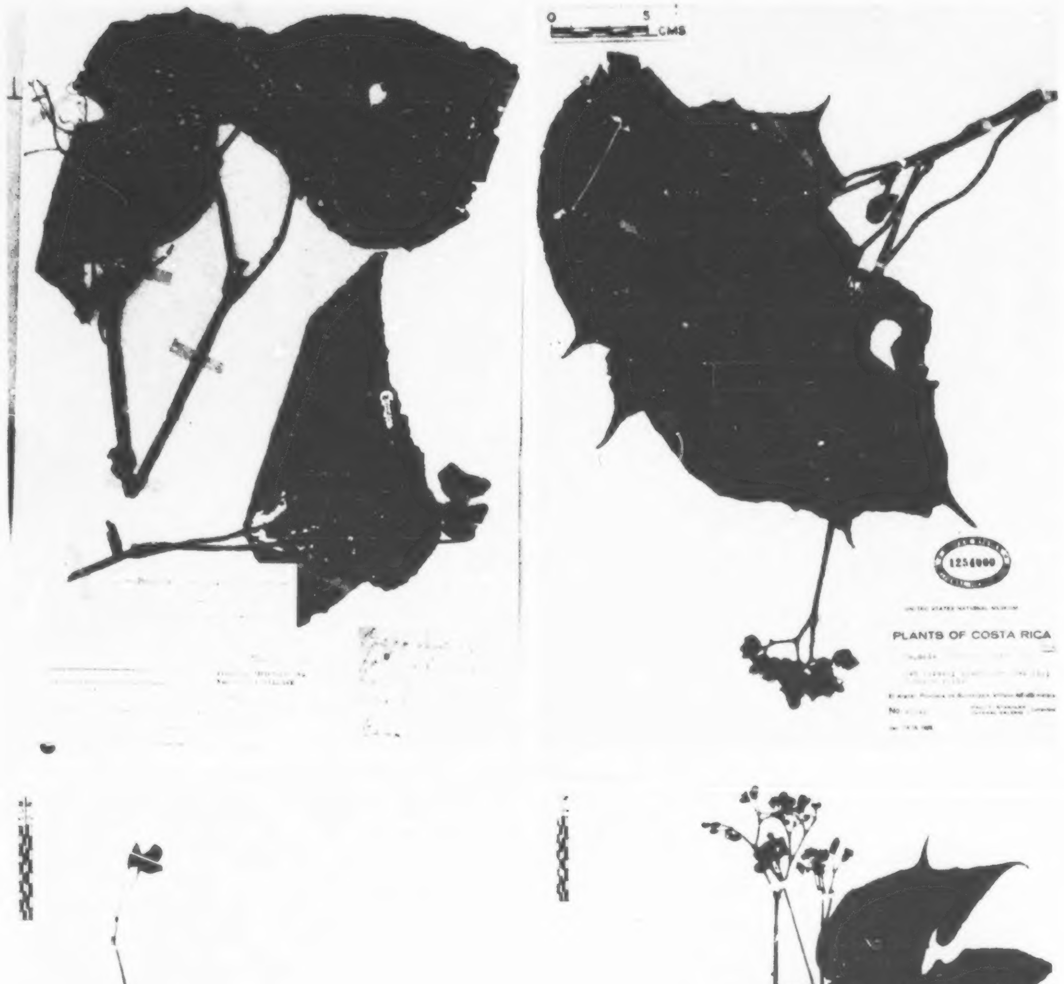
Begonia valida
Mus bot Berol

32.1, *B. robusta;* 32.2, *B. parvistipulata;* 32.3, *B. rutilans;* 32.4, *B. valida.*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UNITED STATES NATIONAL MUSEUM
PLANTS OF COSTA RICA
No.
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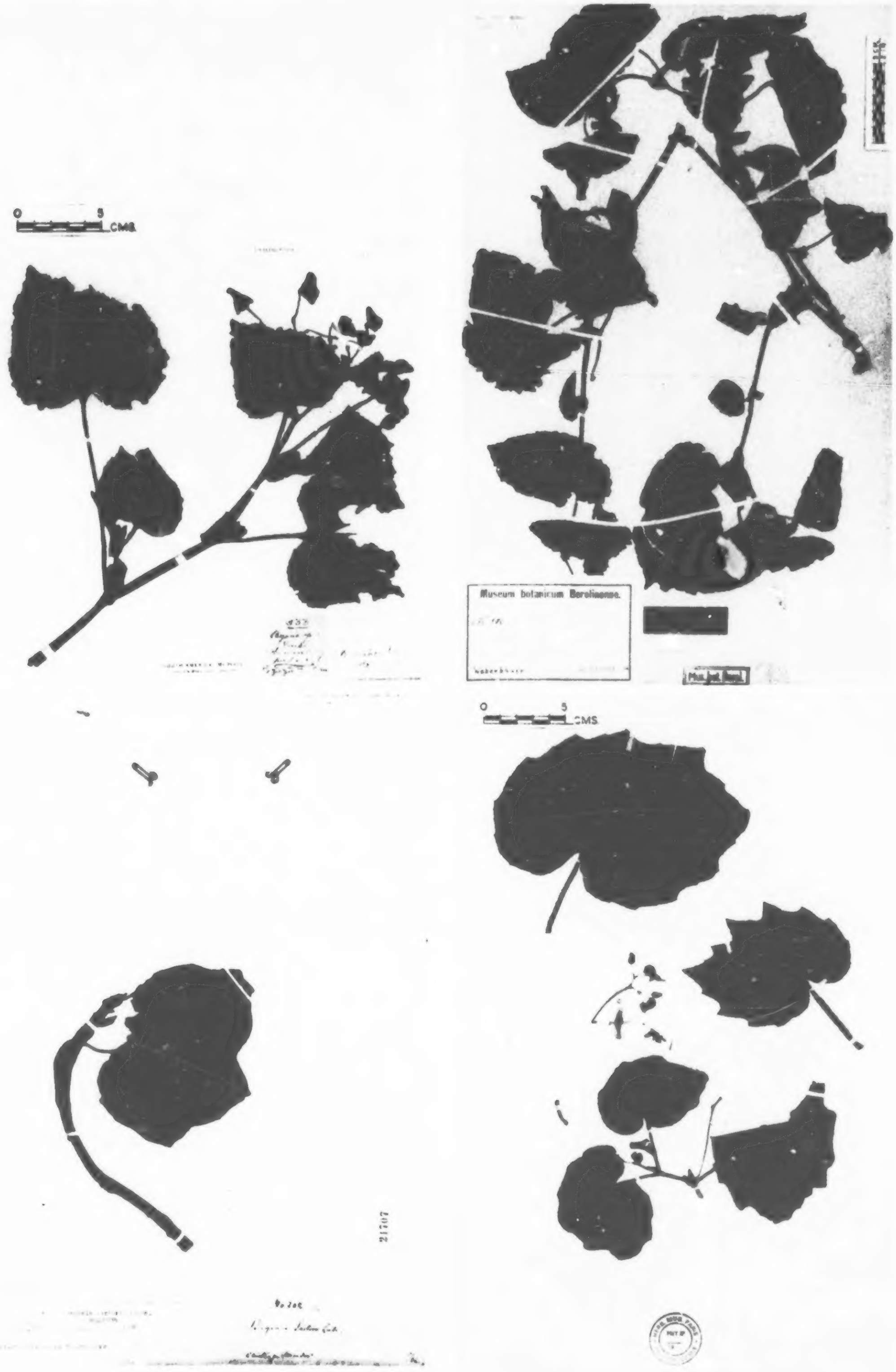
32.5, *B. foveolata;* 32.6, *B. valerioi;* 32.7, *B. ornithocarpa;* 32.8, *B. involucrata.*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Museum botanicum Berolinense.
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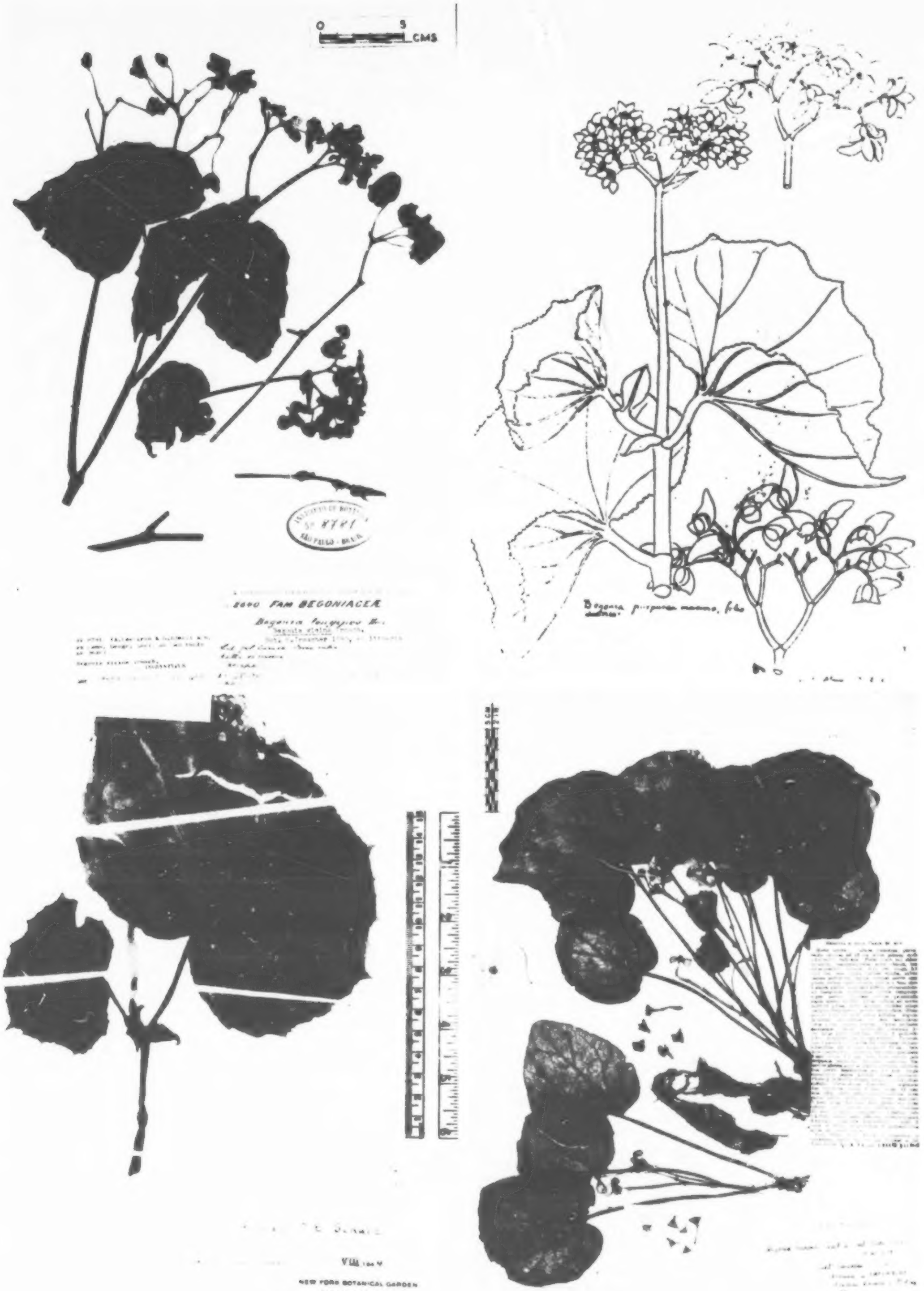
32.9, *B. lophoptera;* 32.10, *B. peltigera;* 32.11, *B. sarcophylla;* 32.12, *B. kouy-tcheouensis.*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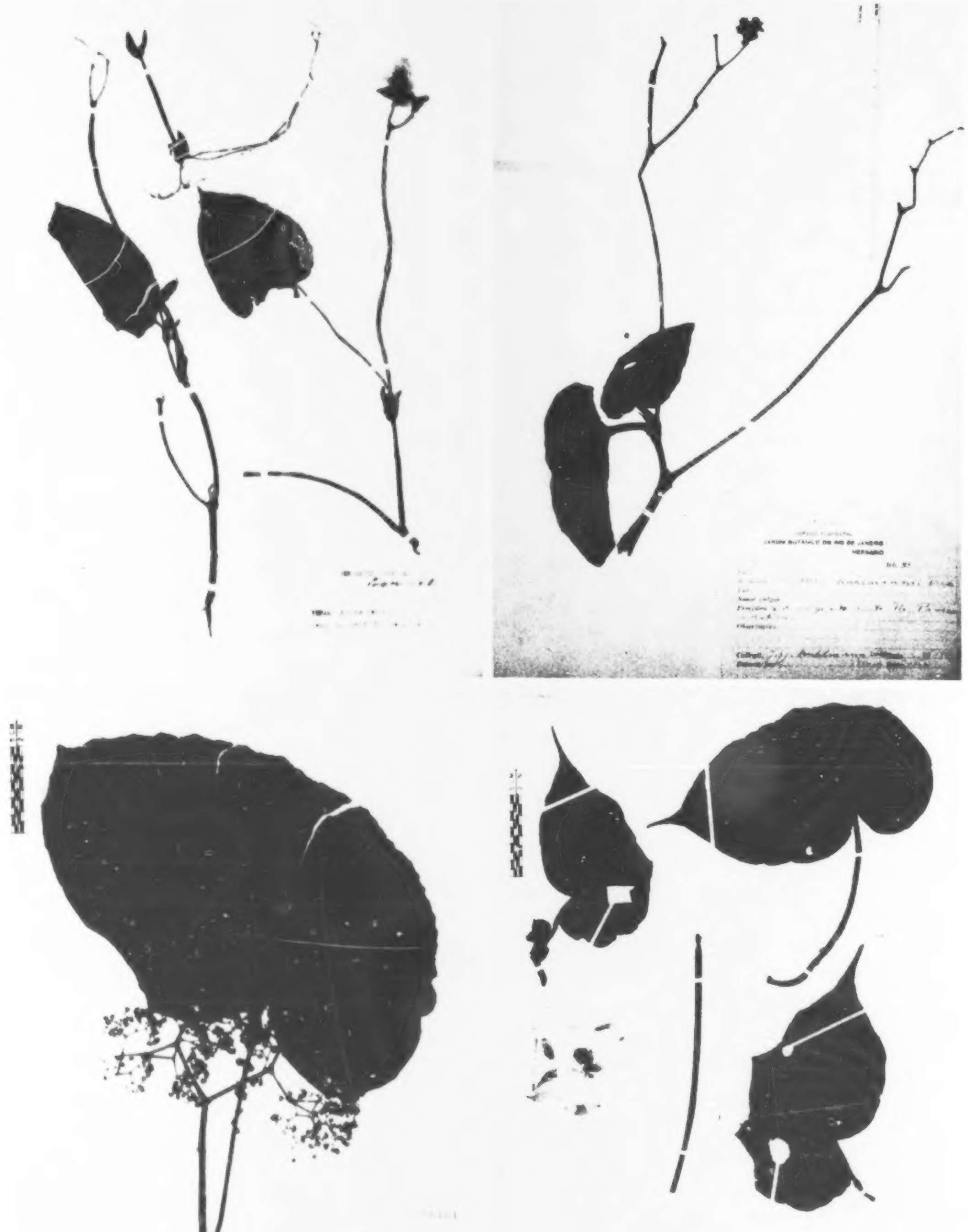
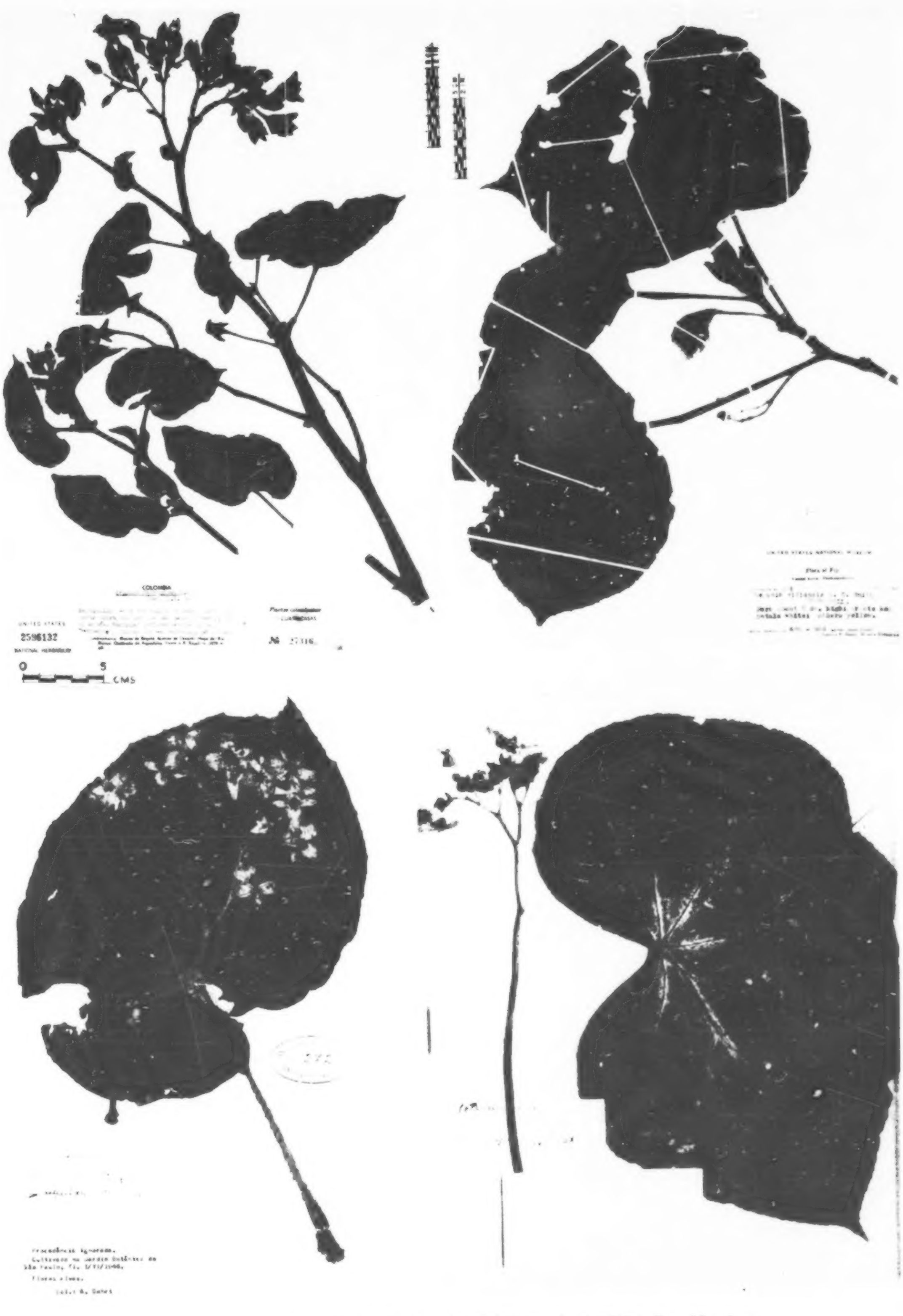
FAM BEGONIACEÆ
NEW YORK BOTANICAL GARDEN
PLANTS OF ST. KITTS

32.13, *B. vicina;* 32.14, *B. obliqua;* 32.15, *B. retusa;* 32.16, *B. murina.*


PLANTAS DO BRASIL
Mus bot Berol

32.17, *B. longicaulis;* 32.18, *B. kuhlmannii;* 32.19, *B. caraguatatubensis;* 32.20, *B. schenckii.*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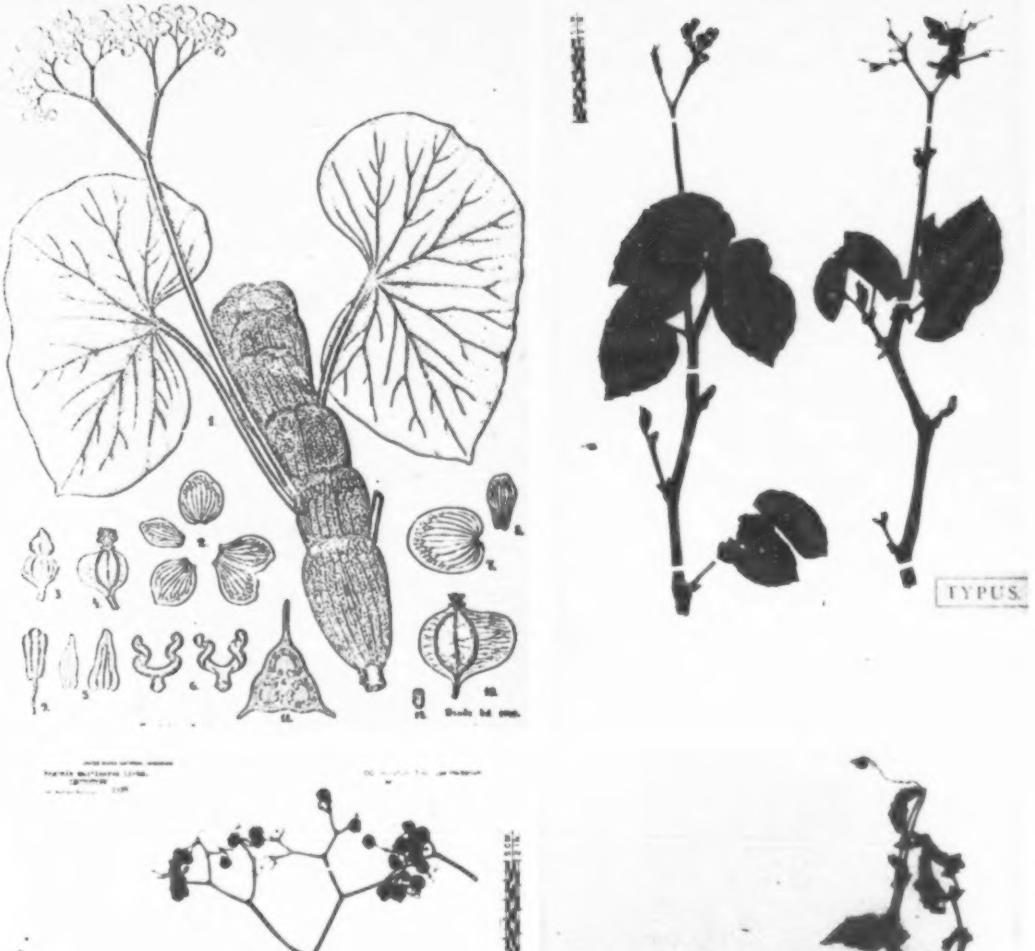
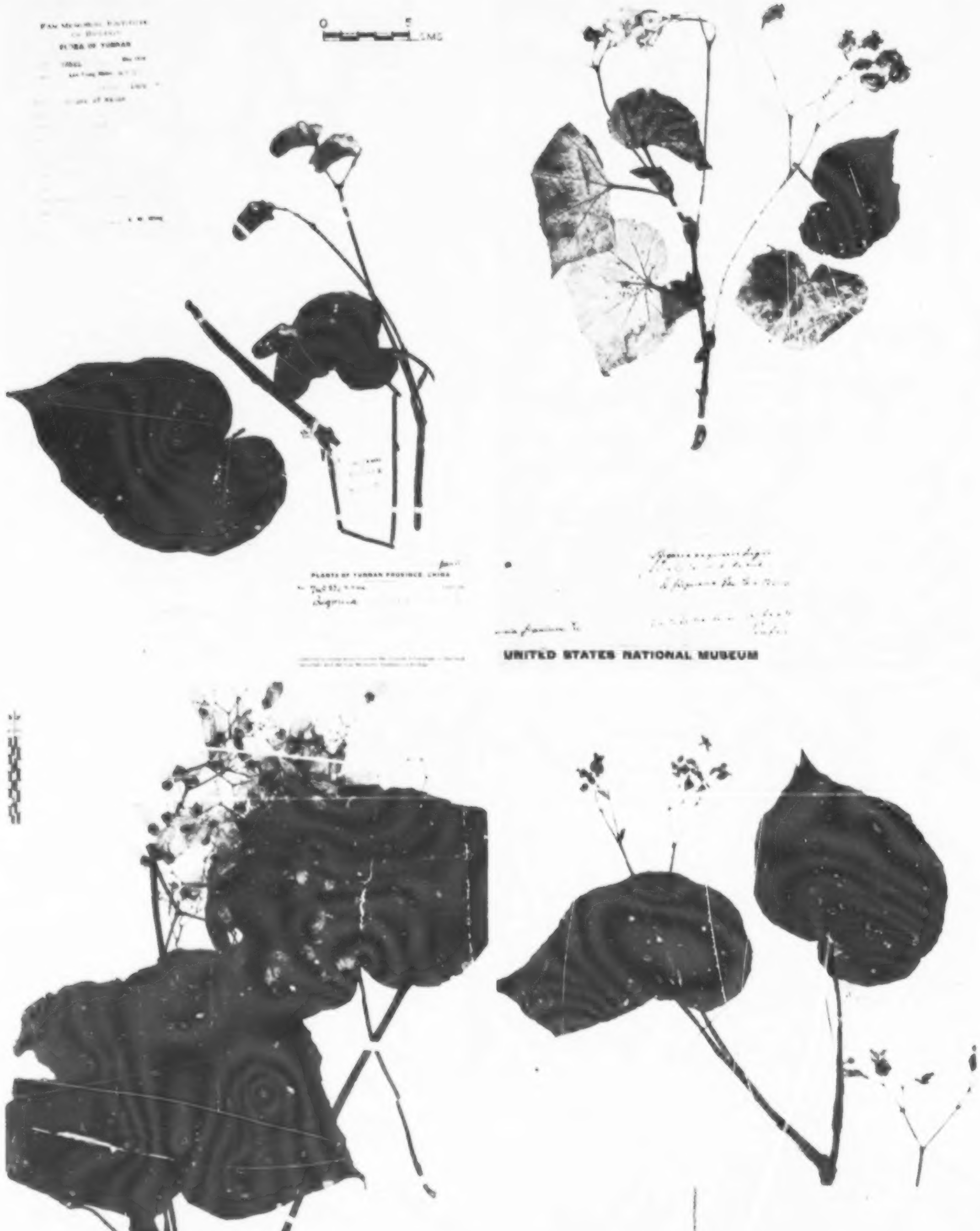
UNITED STATES NATIONAL MUSEUM
Flora of Fiji

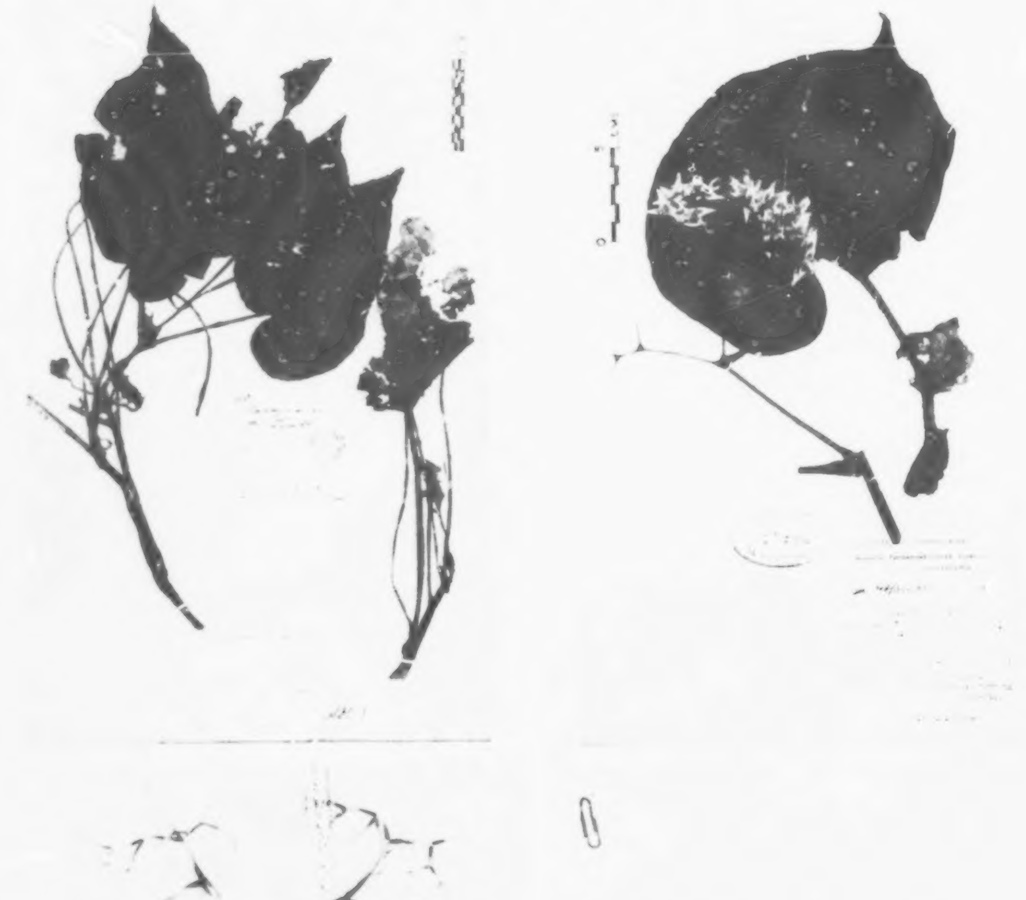
32.21, *B. ferruginea;* 32.22, *B. vitiensis;* 32.23, *B. gehrtii;* 32.24, *B. valdensium.*



32.25, *B. curtii;* 32.26, *B. pycnantha;* 32.27, *B. multinervia;* 32.28, *B. domingensis.*

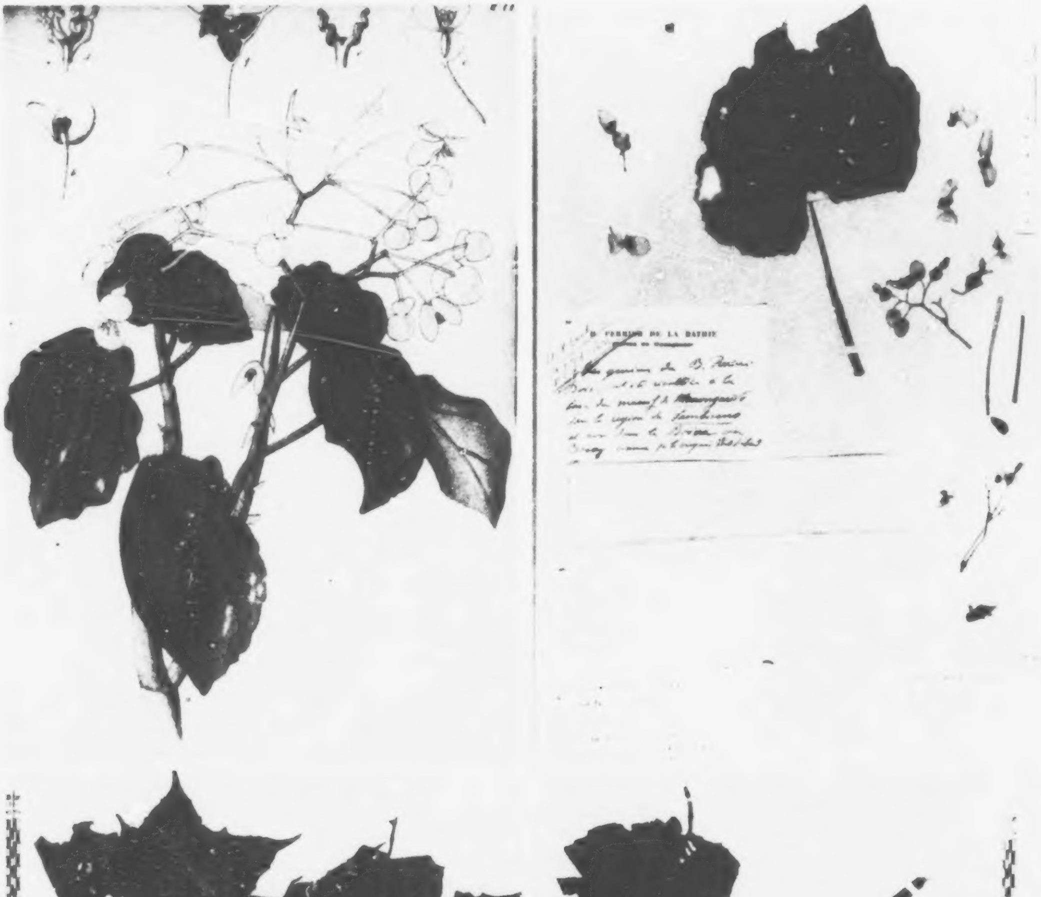

FLORA OF YUNNAN
PLANTS OF YUNNAN PROVINCE, CHINA
UNITED STATES NATIONAL MUSEUM

32.29, *B. dryadis;* 32.30, *B. stipulacea;* 32.31, *B. corredorana;* 32.32, *B. microcarpa.*

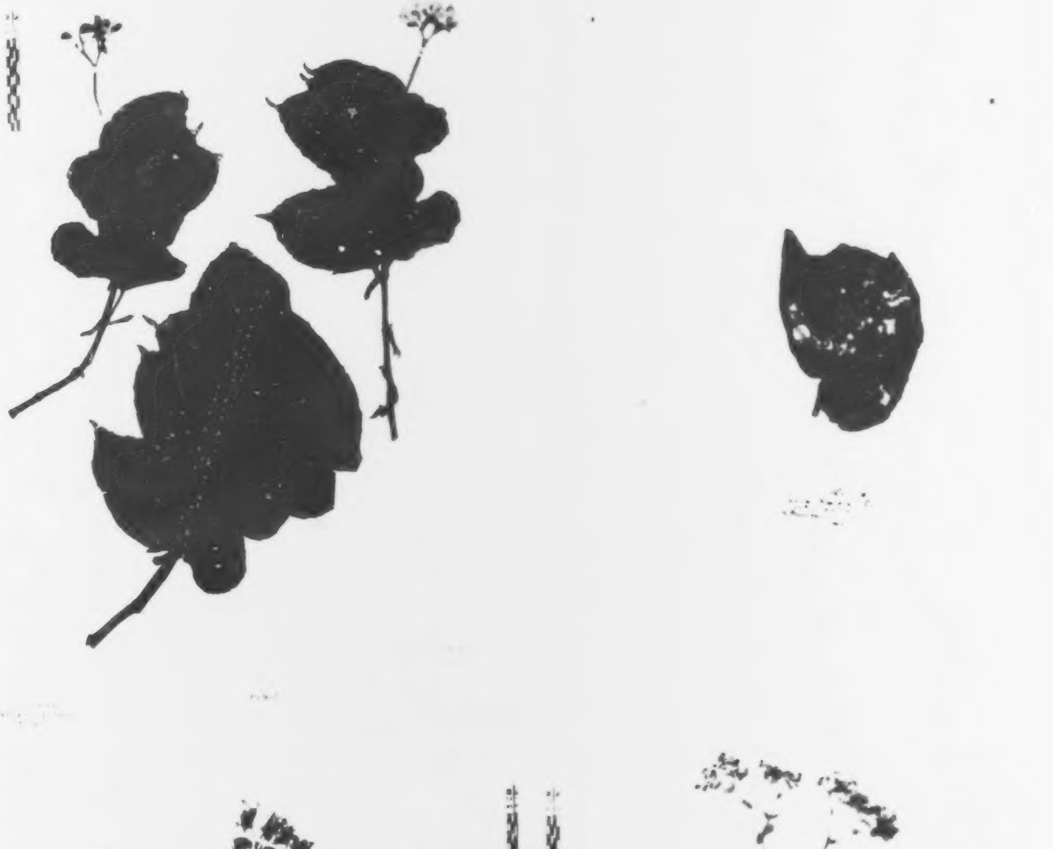


32.33. *B. lyallii*; 32.34. *B. fernando-costae*; 32.35. *B. odorata*; 33.1. *B. tribracteata*.

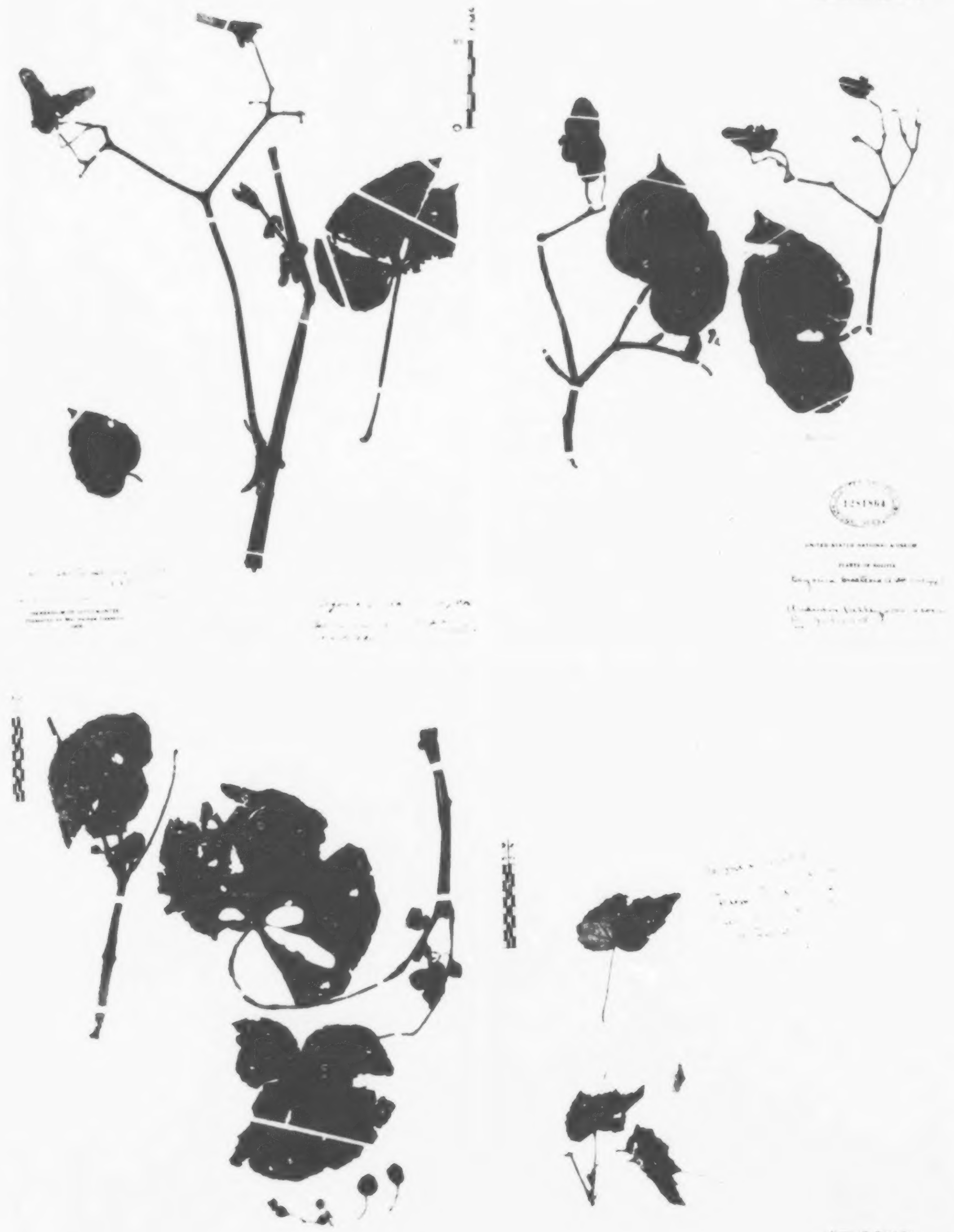
33.2. *B. seychellensis*; 33.3. *B. homonyma*; 33.4. *B. cyathophora.*


PERRIER DE LA BATHIE

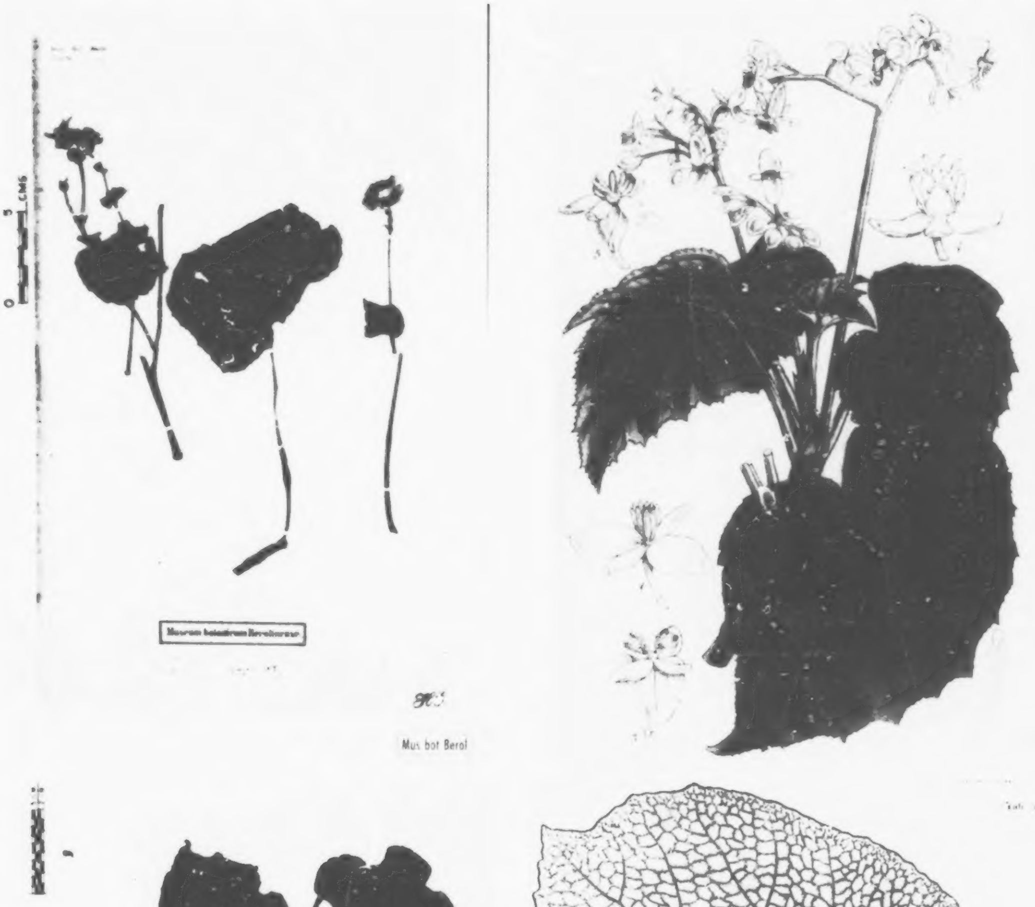
33.5, *B. roezlii;* 33.6, *B. perrieri;* 33.7, *B. purpusii;* 33.8, *B. baronii.*



33.9, *B. subspinulosa*; 33.10, *B. viridiflora*; 33.11, *B. suprafastigiata*; 33.12, *B. mazae*.



33.13, *B. santarosensis;* 33.14, *B. fissistyla;* 33.15, *B. brachyptera;* 34.1, *B. exilis.*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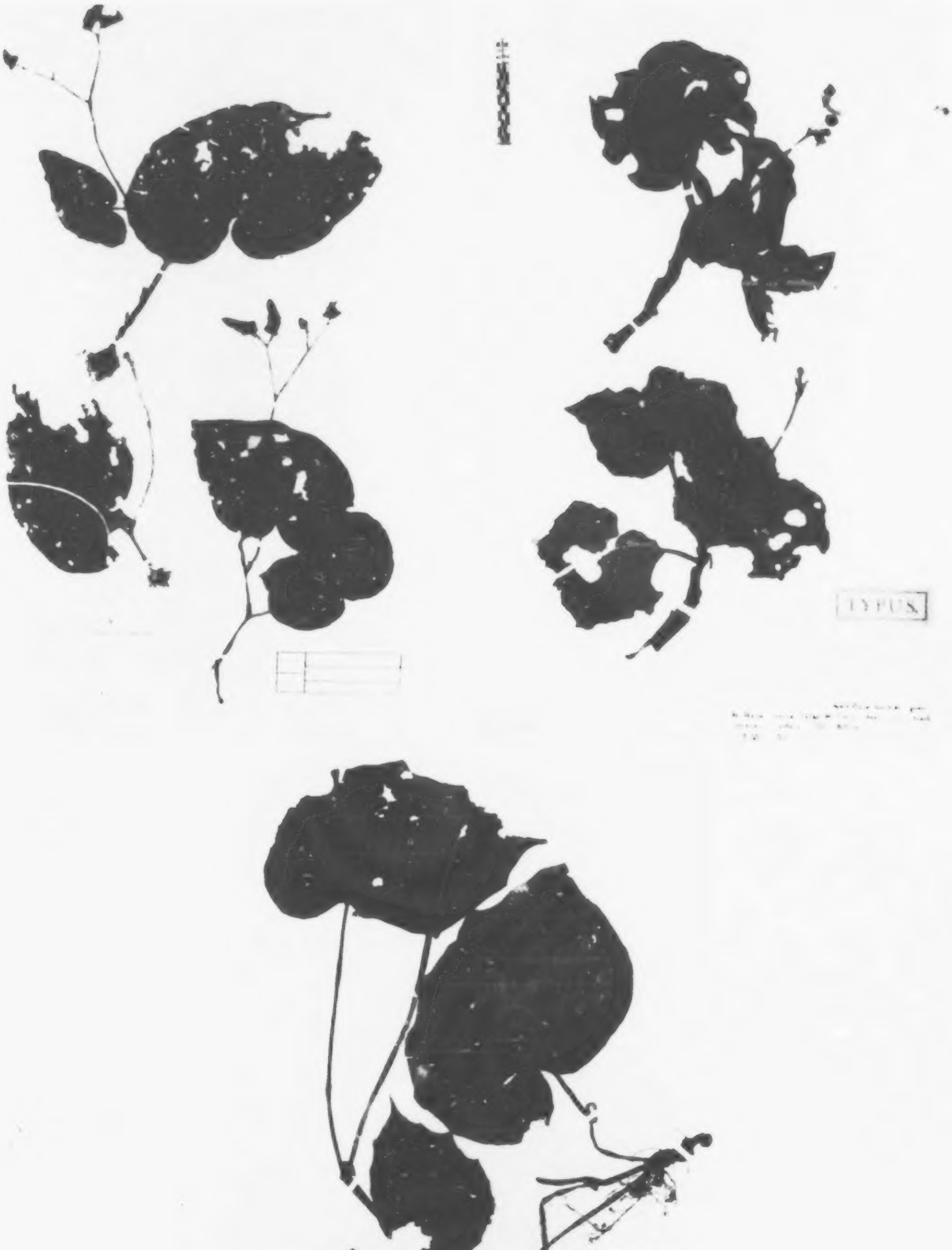
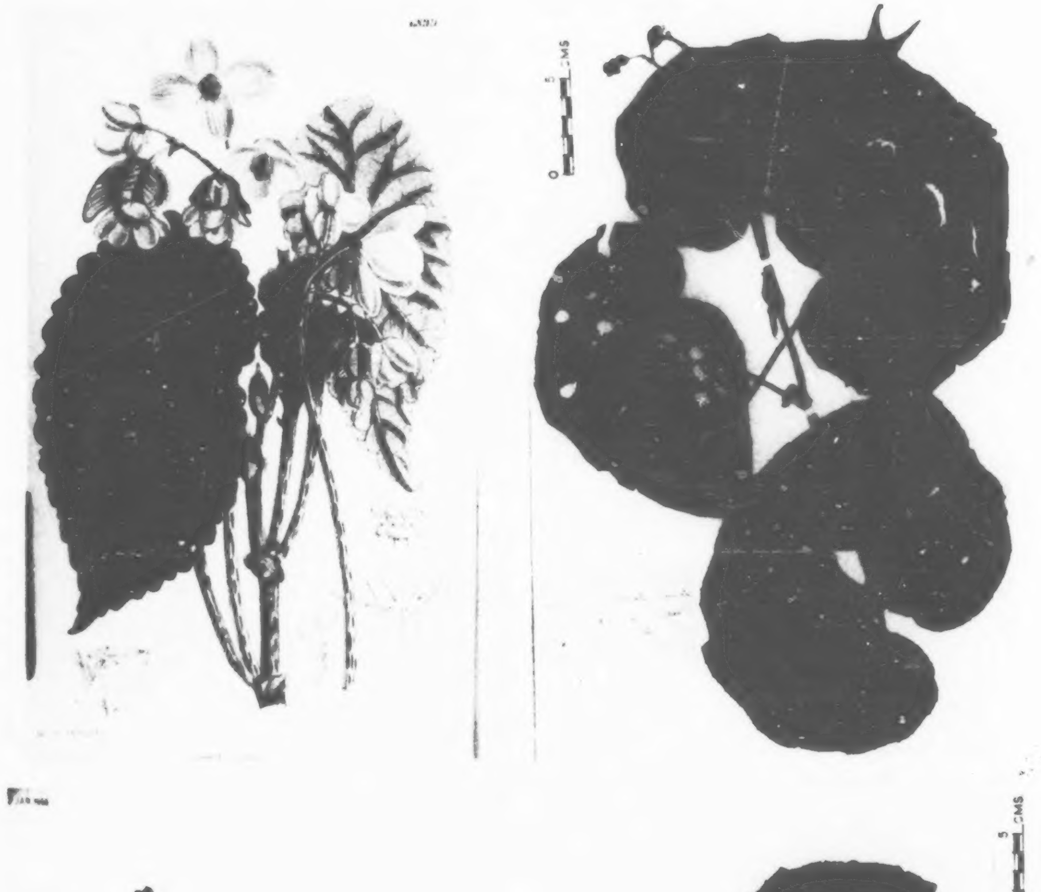
34.2, *B. concanensis;* 34.3, *B. frigida;* 34.4, *B. glaberrima;* 34.5, *B. moysesii.*



34.6, *B. rimarum;* 34.7, *B. azuensis;* 34.8, *B. reniformis.*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34.9, *B. johnstonii*; 34.10, *B. laevis*; 34.11, *B. megaptera*; 34.12, *B. altissima*.

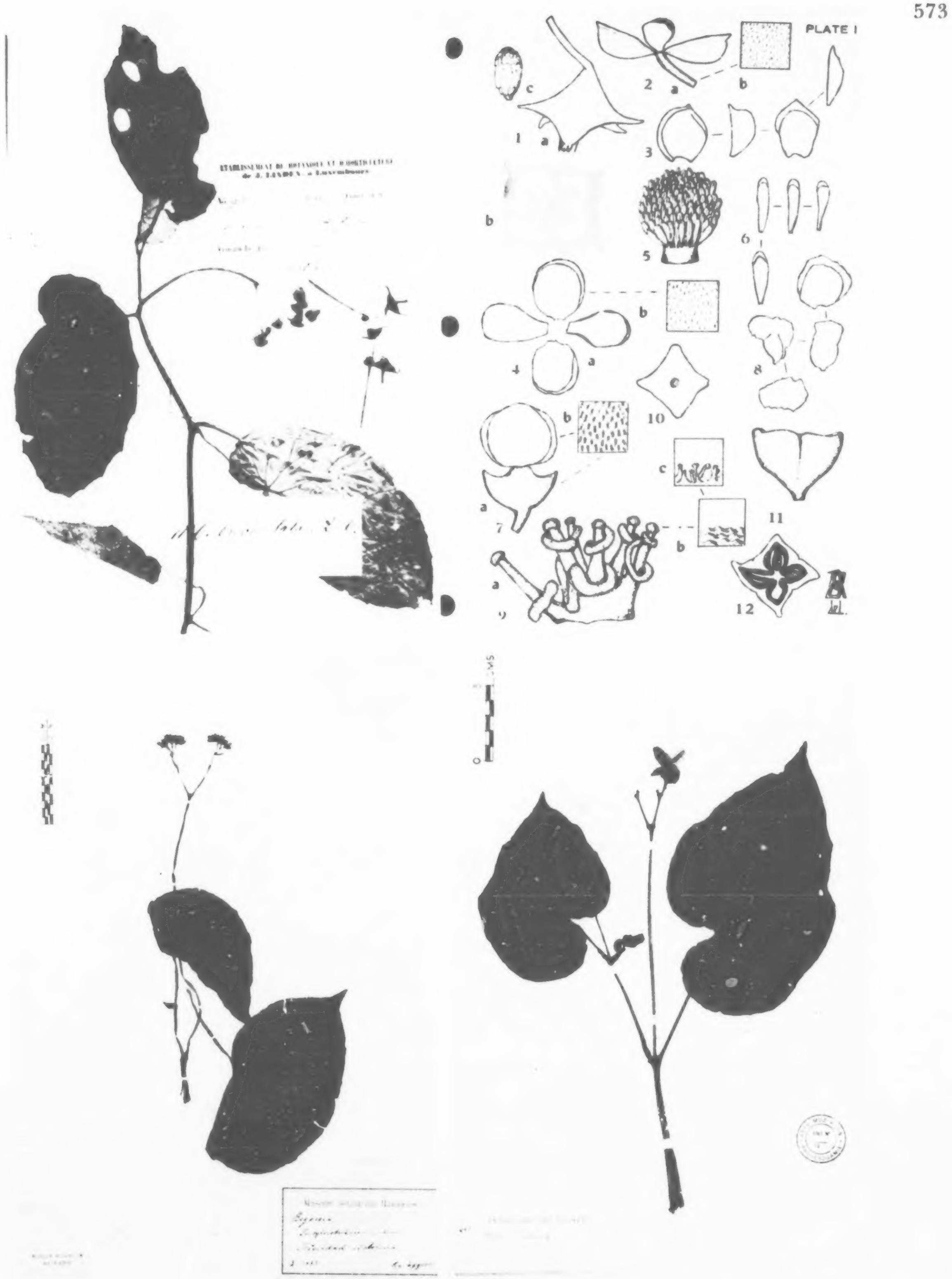
PLATE I
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4 a
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6
7 a
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c
8
9 a
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11
12
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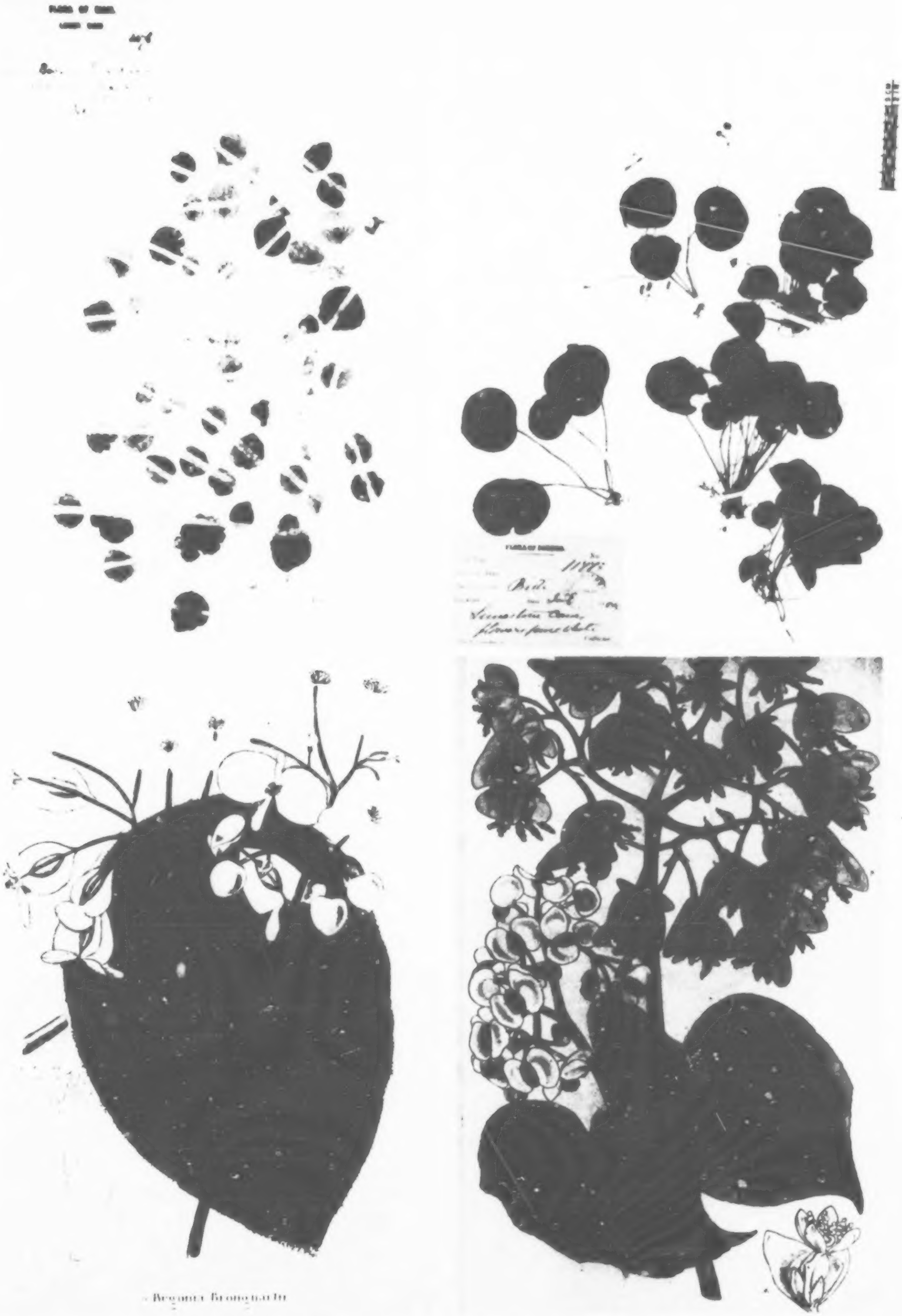
34.13, *B. brevipetala*; 34.14, *B. roxburghii*; 34.15, *B. eciliata*; 34.16, *B. siamensis*.


Begonia Brongniartii

S1, *B. pumilio;* S2, *B. speluncae;* S3, *B. brongniartii;* S4, *B. wagenerana.*

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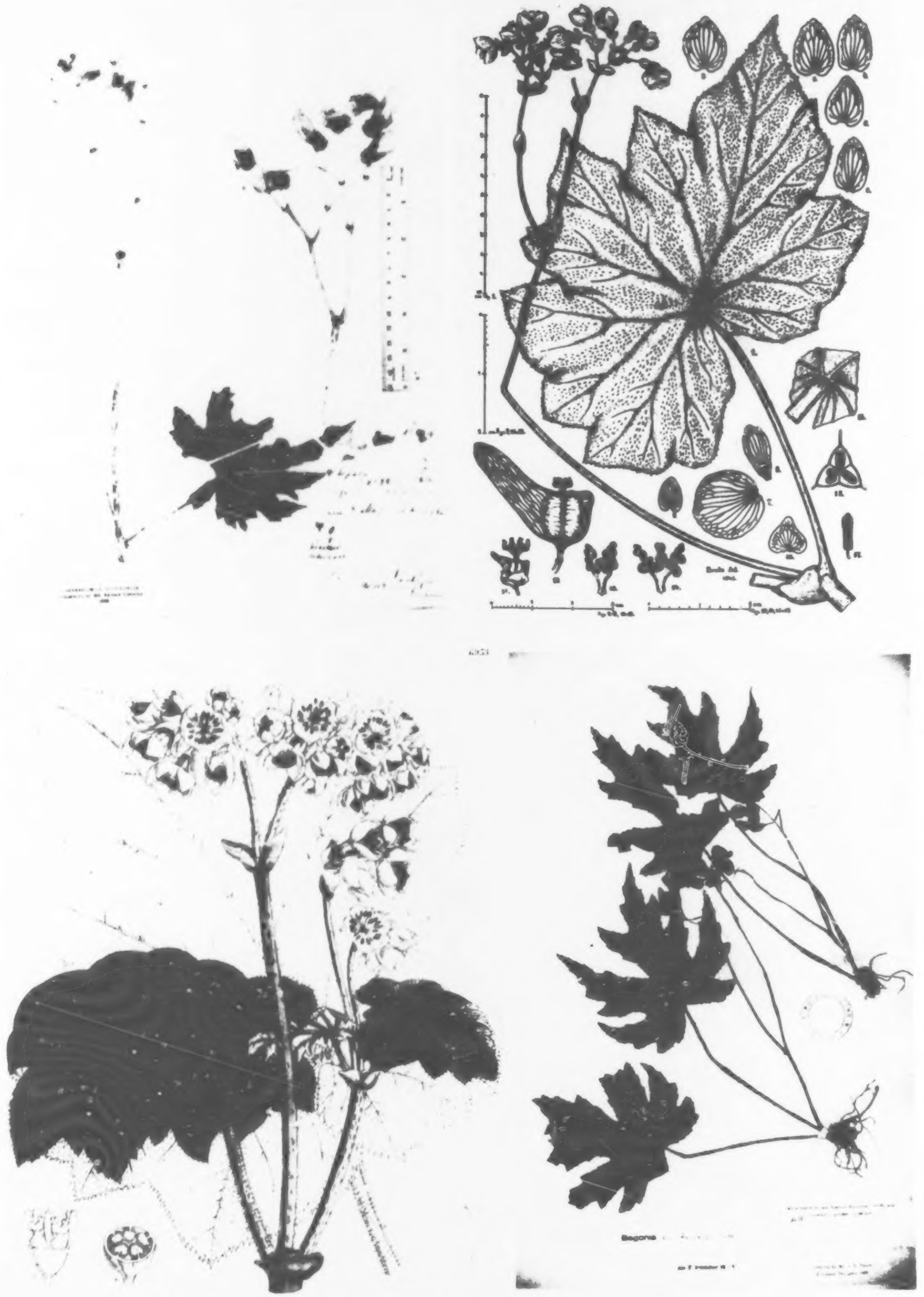
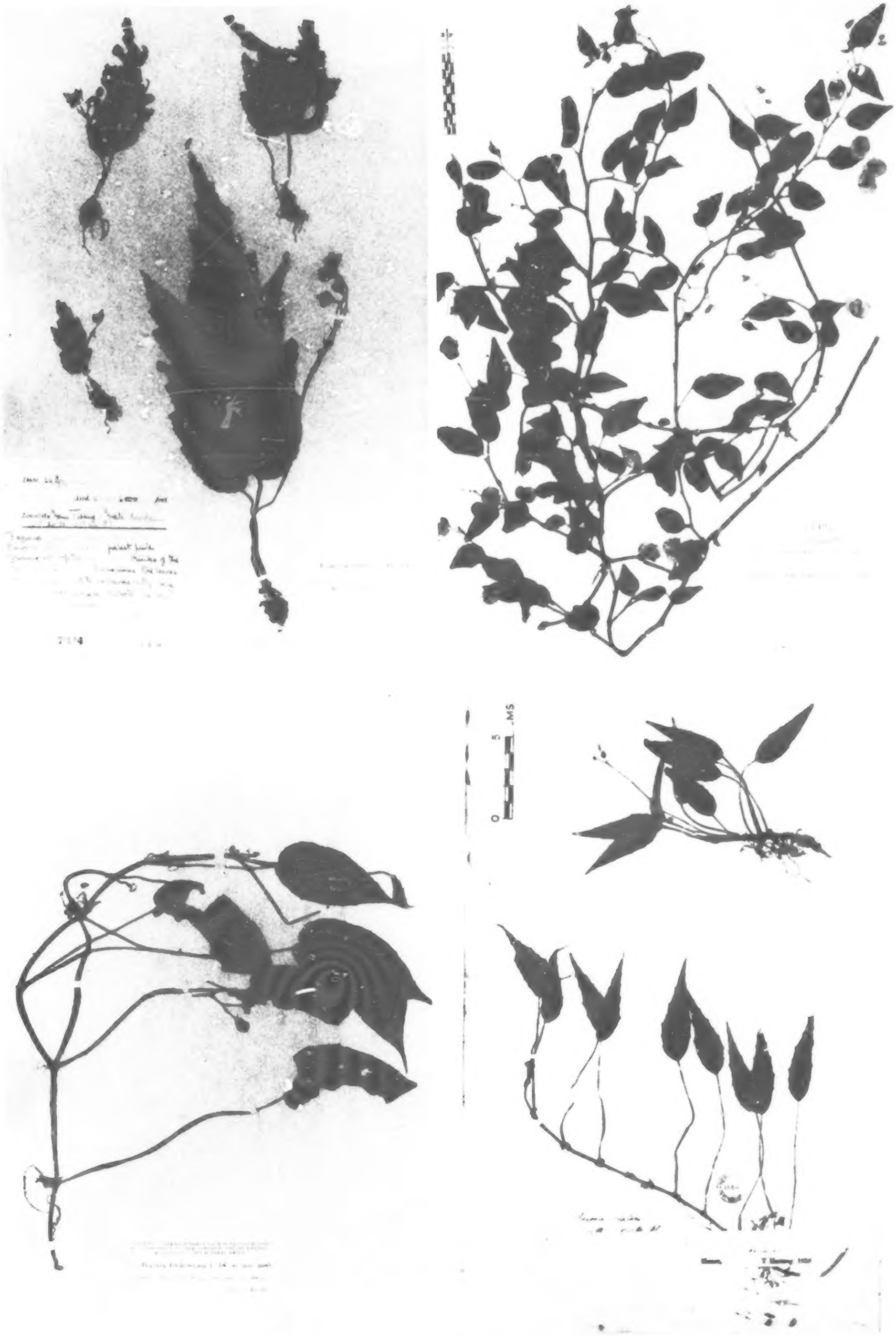
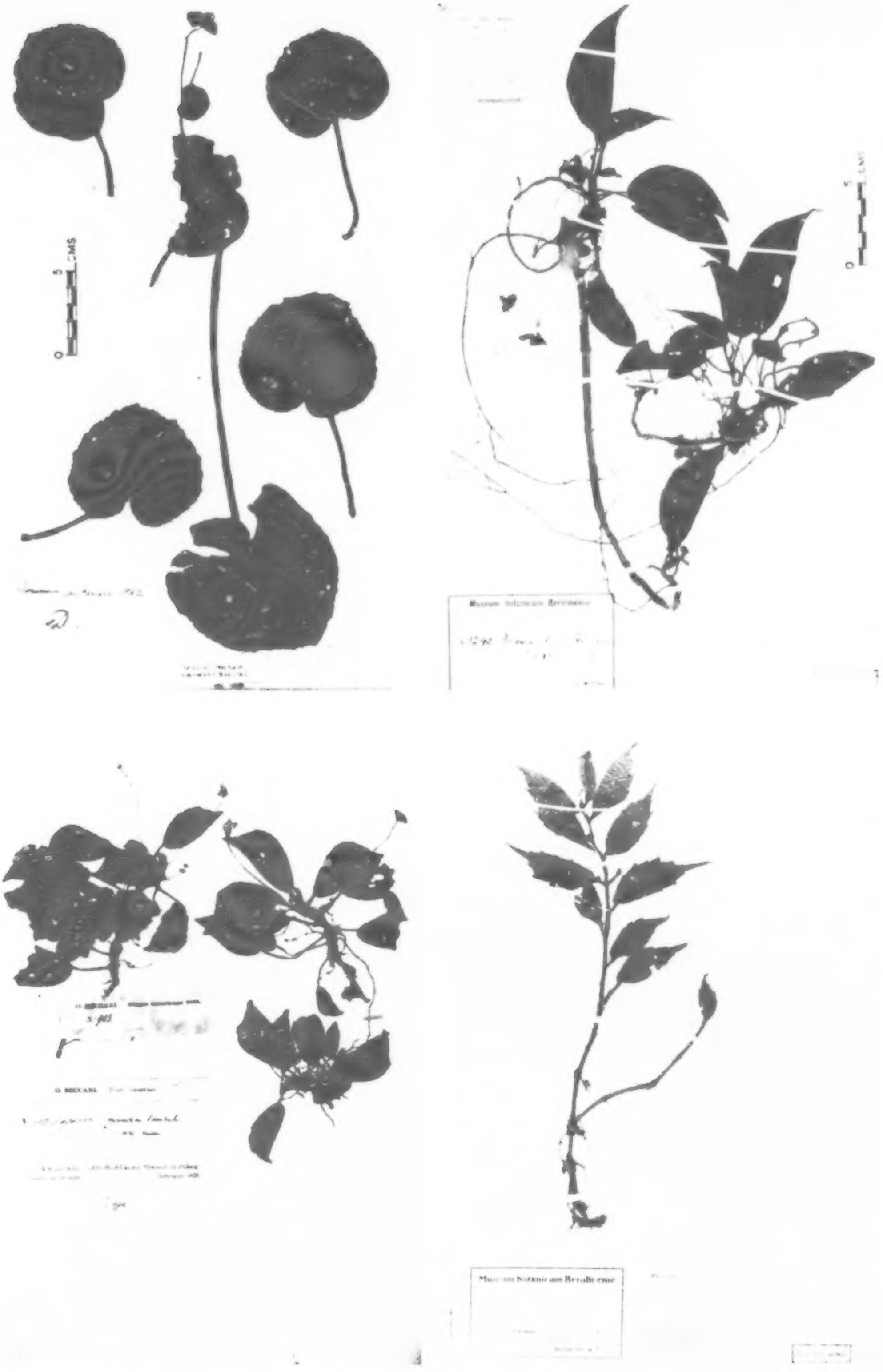


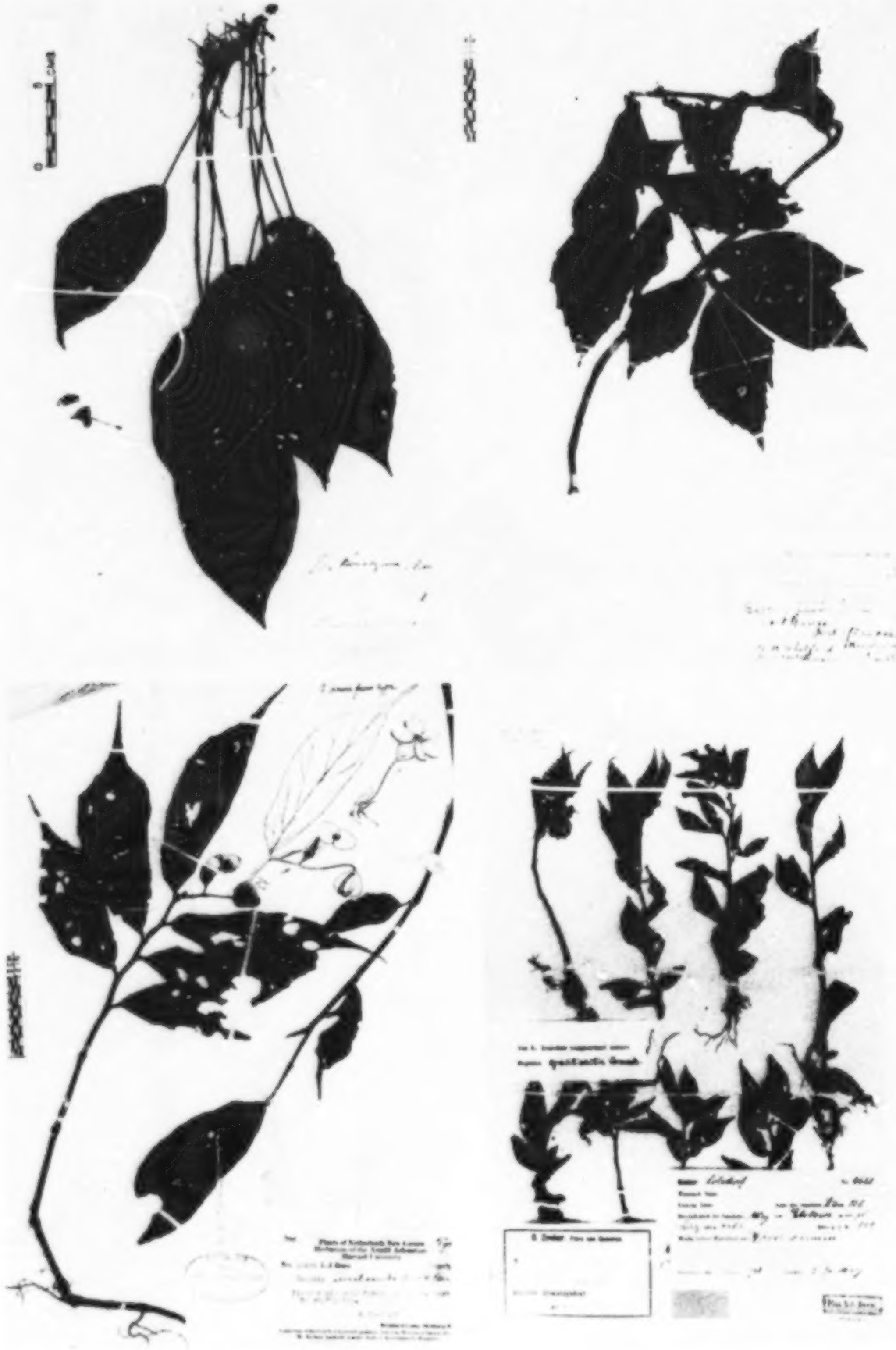
S5, *B. leathermaniae;* S6, *B. paranaënsis;* S7, *Hilldebrandia sandwicensis;* S8, *B. imitans.*



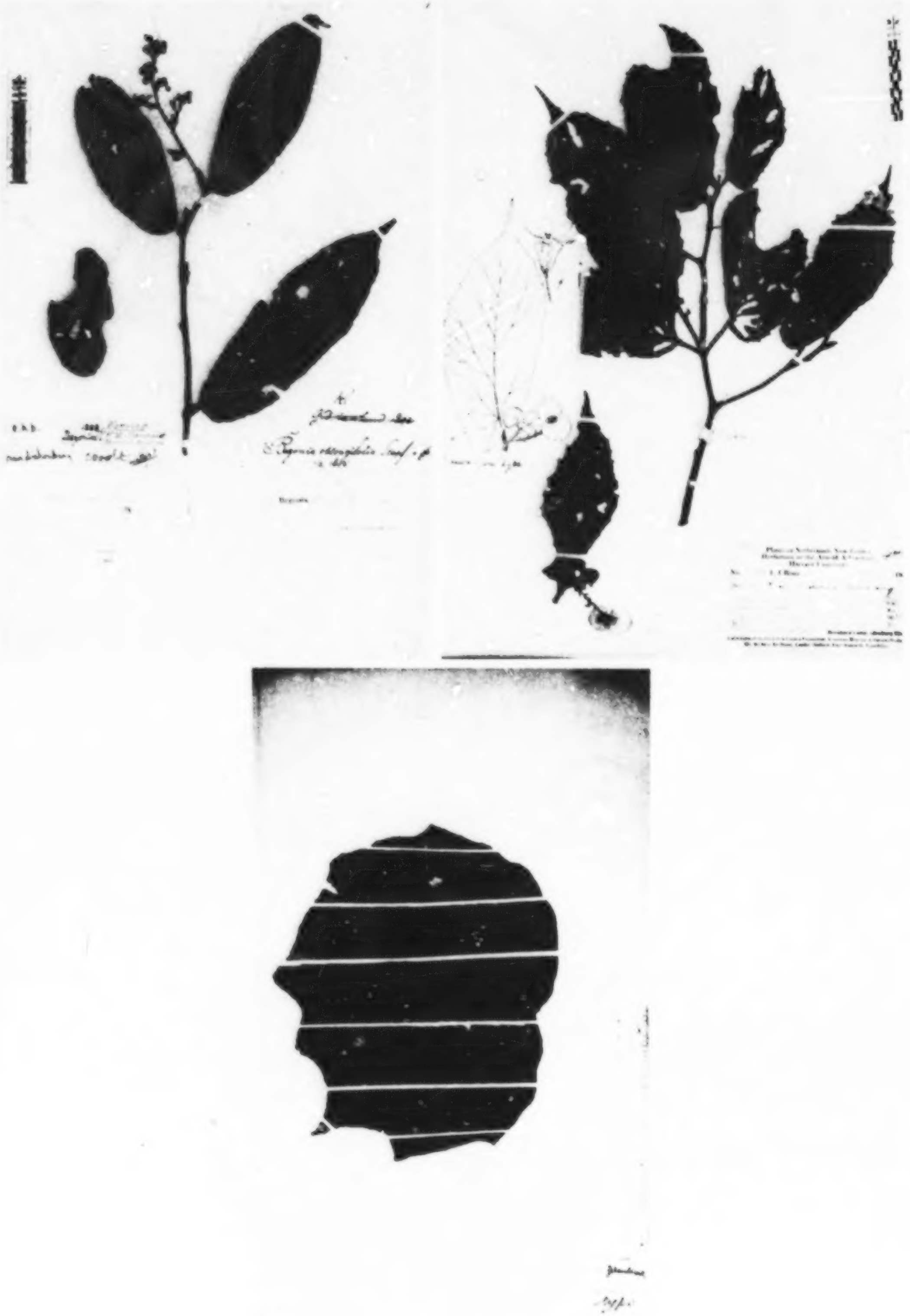
S9, *B. hymenophylloides;* S10, *B. wenzelii;* S11, *B. trichosepala;* S12, *B. reptans.*



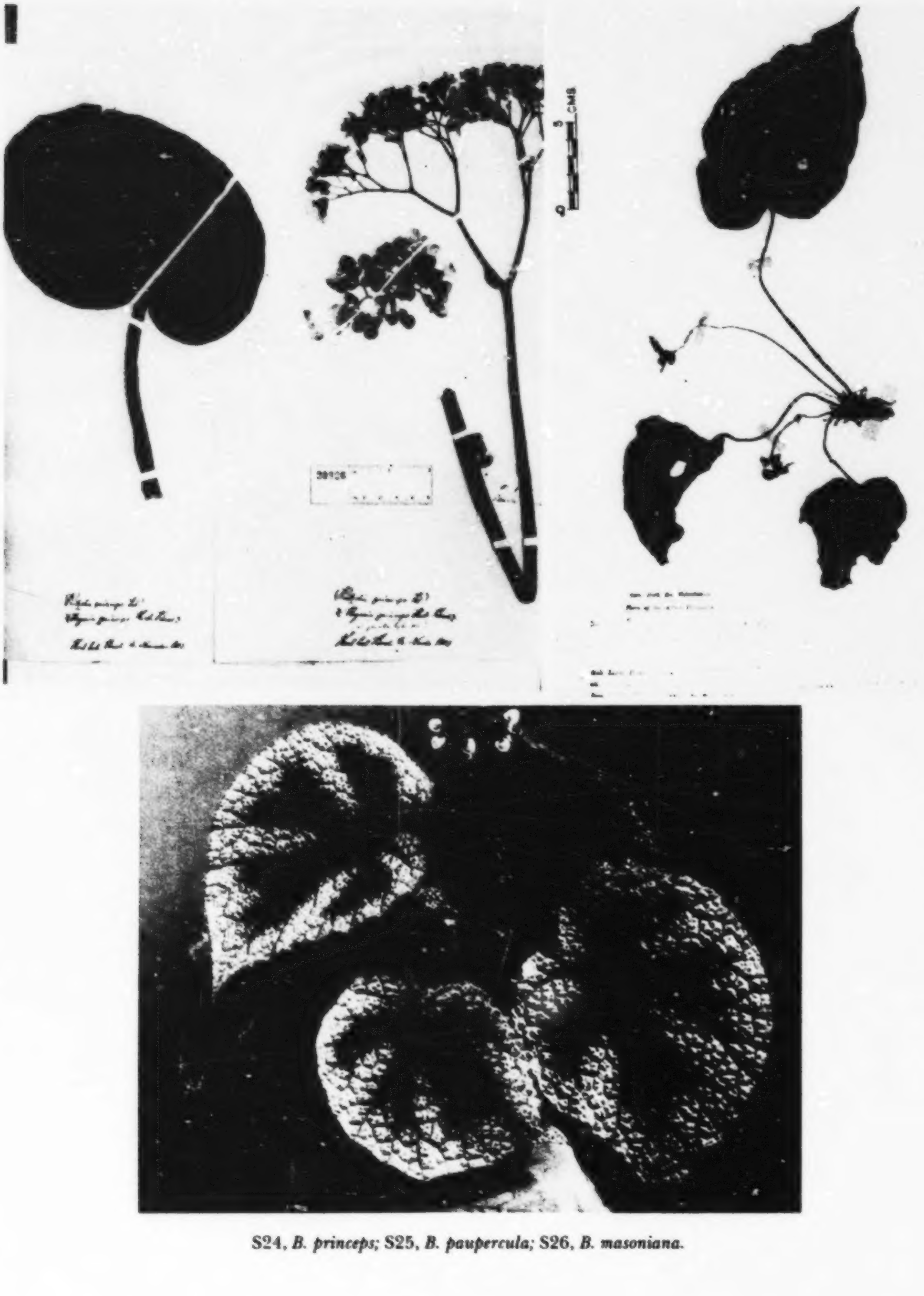
S13, *B. parishii;* S14, *B. adolfi-friderici;* S15, *B. inversa;* S16, *B. gossweileri.*



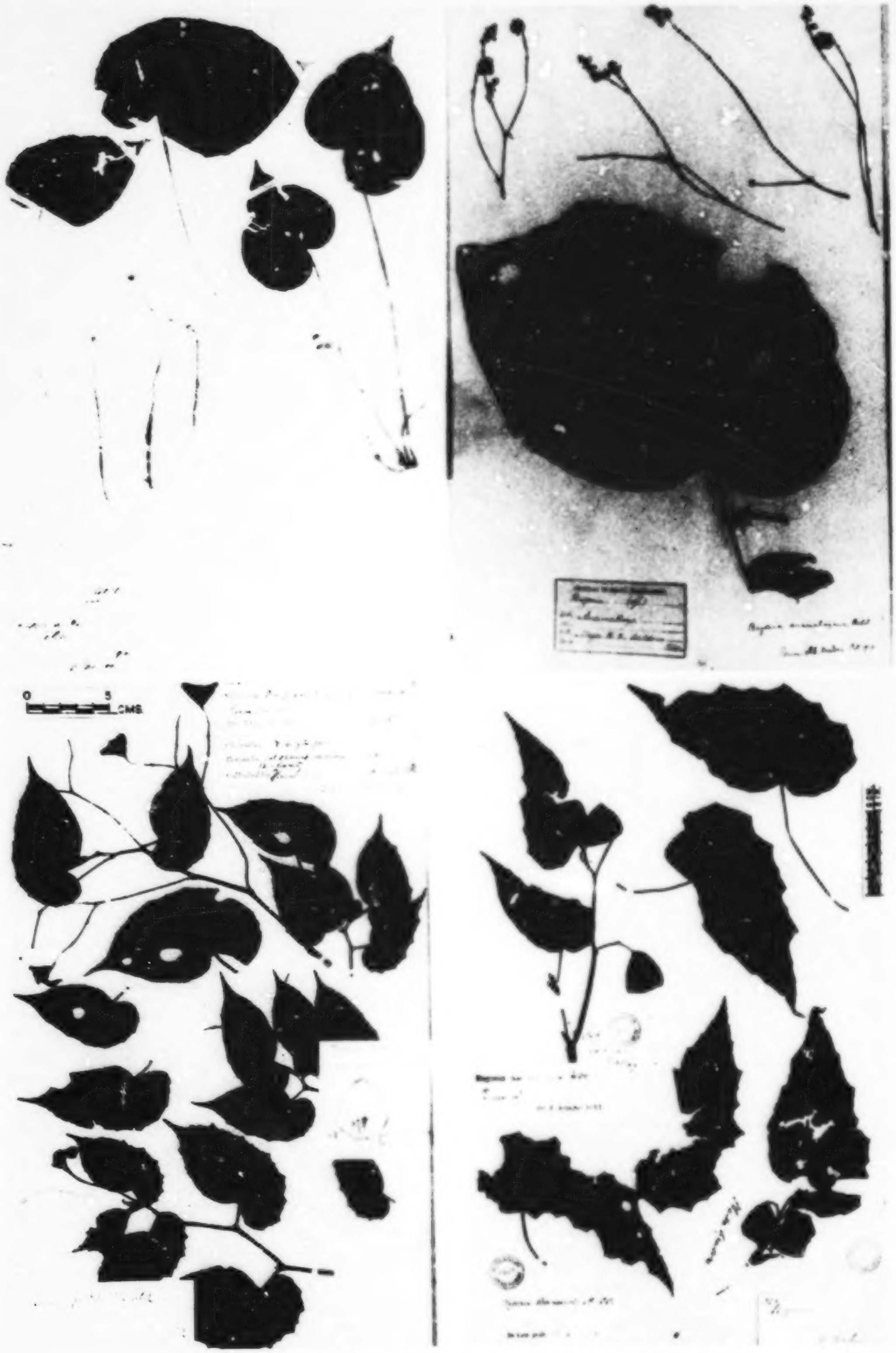
S17, *B. herveyana;* S18, *B. ciliifera;* S19, *B. serraticauda;* S20, *B. gracilicaulis.*



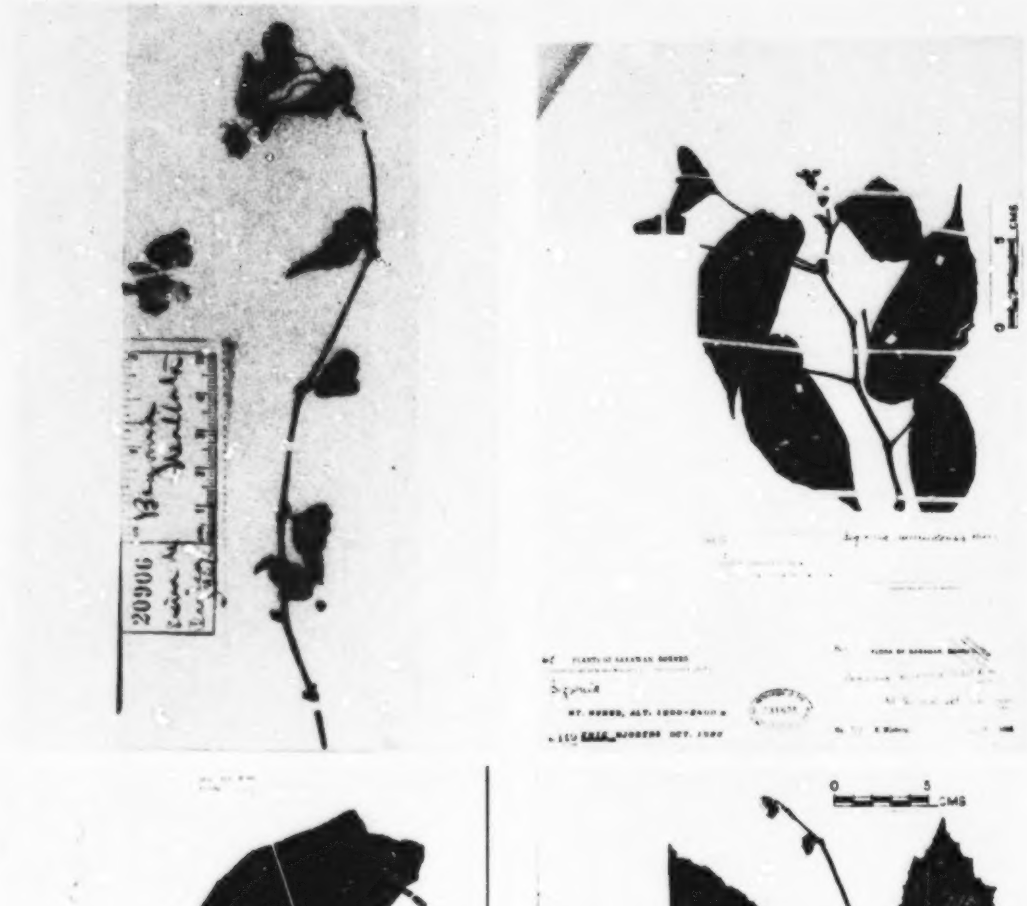
S21, *B. oblongifolia;* S22, *B. mystacina;* S23, *B. carrieae.*



S24, *B. princeps*; S25, *B. paupercula*; S26, *B. masoniana*.



S27, *B. robinsonii;* S28, *B. anaimalaiensis;* S29, *B. pensilis;* S30, *B. borneënsis.*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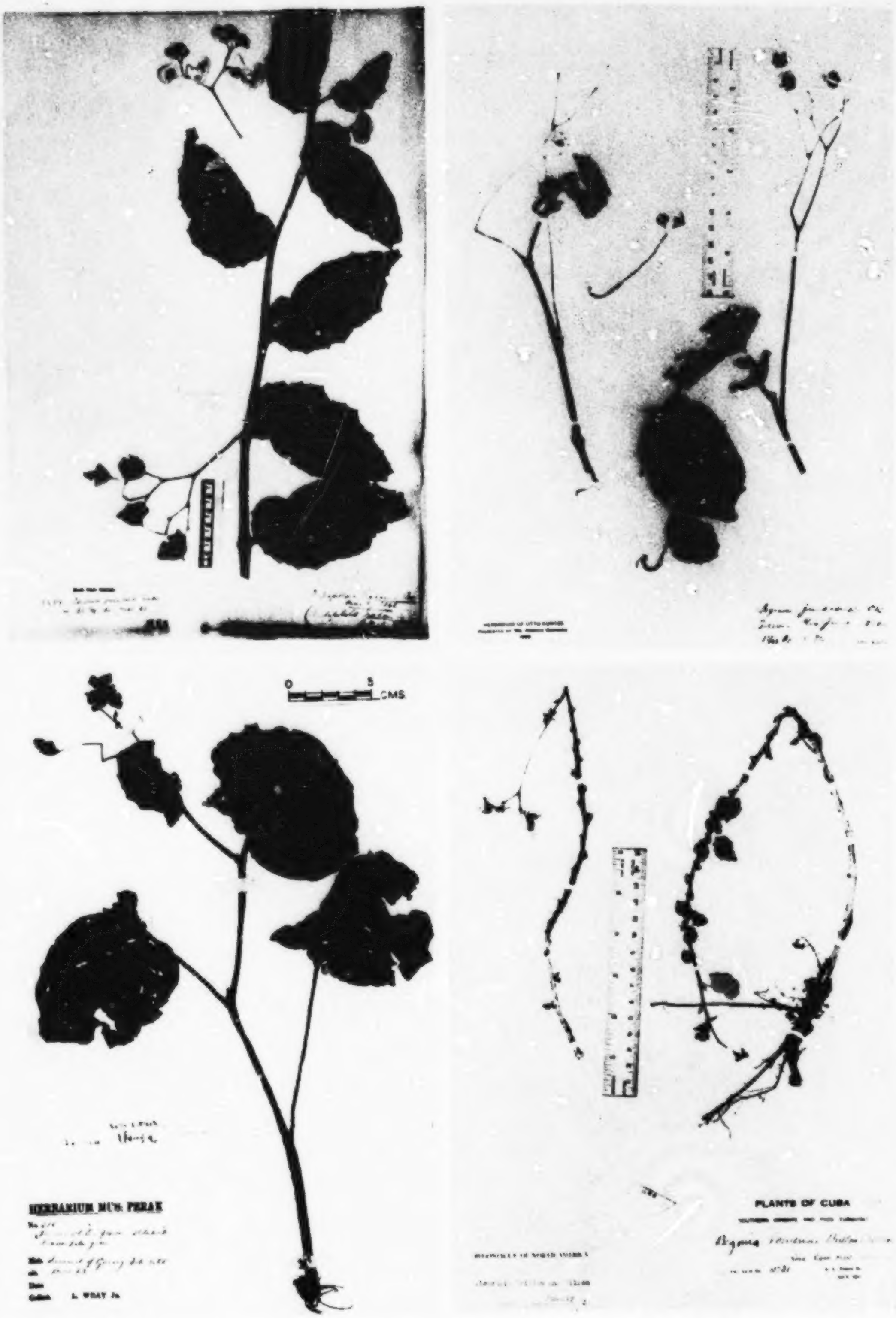
FLORA OF PAPUA
Mus. bot. Berol

S31, *B. dealbata;* S32, *B. murudensis;* S33, *B. tafaënsis;* S34, *B. rupicola.*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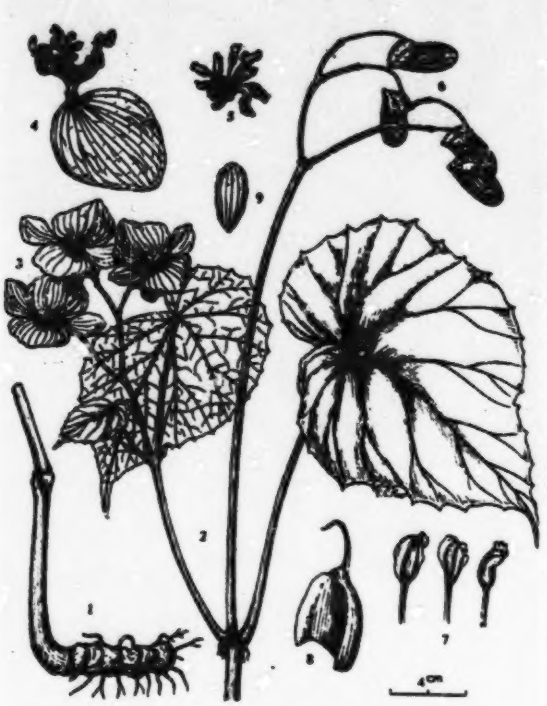
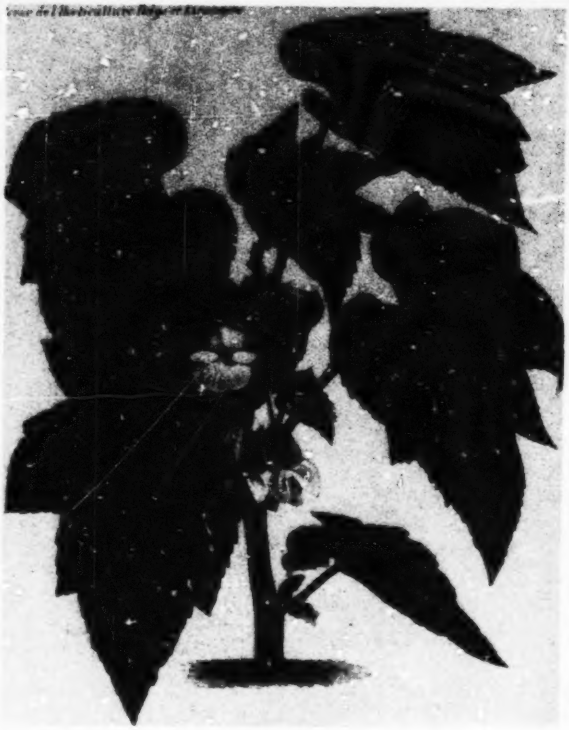
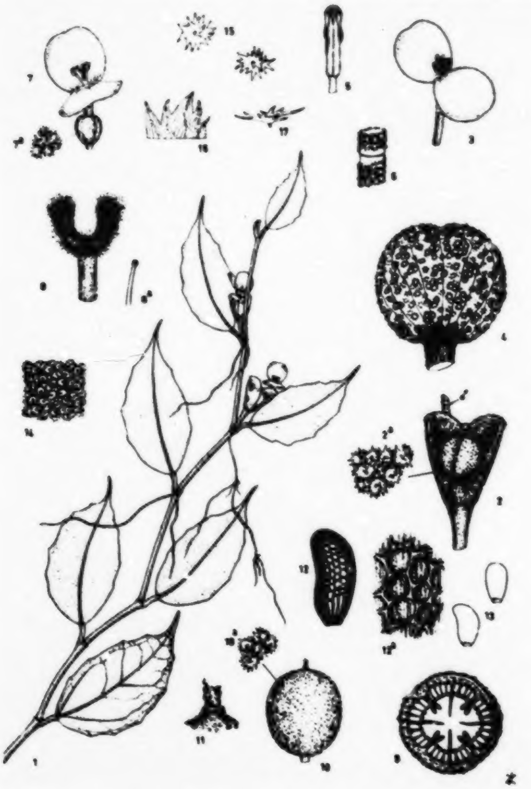
5
CMS
HERBARIUM MUS: PERAK
PLANTS OF CUBA

S35, *B. bufoderma;* S36, *B. juntasensis;* S37, *B. lowiana;* S38, *B. lomensis.*







S39, *B. chitoensis;* S40, *B. olbia;* S41, *B. bonus-henricus.*

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Manuscripts intended for series publication receive substantive review (conducted by their originating Smithsonian museums or offices) and are submitted to the Smithsonian Institution Press with Form SI-36, which must show the approval of the appropriate authority designated by the sponsoring organizational unit. Requests for special treatment—use of color, foldouts, case-bound covers, etc.—require, on the same form, the added approval of the sponsoring authority.

Review of manuscripts and art by the Press for requirements of series format and style, completeness and clarity of copy, and arrangement of all material, as outlined below, will govern, within the judgment of the Press, acceptance or rejection of manuscripts and art.

Copy must be prepared on typewriter or word processor, double-spaced, on one side of standard white bond paper (not erasable), with 1¼" margins, submitted as ribbon copy (not carbon or xerox), in loose sheets (not stapled or bound), and accompanied by original art. Minimum acceptable length is 30 pages.

Front matter (preceding the text) should include: **title page** with only title and author and no other information, **abstract** page with author, title, series, etc., following the established format; table of **contents** with indents reflecting the hierarchy of heads in the paper; also, **foreword** and/or **preface**, if appropriate.

First page of text should carry the title and author at the top of the page; **second page** should have only the author's name and professional mailing address, to be used as an unnumbered footnote on the first page of printed text.

Center heads of whatever level should be typed with initial caps of major words, with extra space above and below the head, but no other preparation (such as all caps or underline, except for the underline necessary for generic and specific epithets). Run-in paragraph heads should use period/dashes or colons as necessary.

Tabulations within text (lists of data, often in parallel columns) can be typed on the text page where they occur, but they should not contain rules or numbered table captions.

Formal tables (numbered, with captions, boxheads, stubs, rules) should be submitted as carefully typed, double-spaced copy separate from the text; they will be typeset unless otherwise requested. If camera-copy use is anticipated, do not draw rules on manuscript copy.

Taxonomic keys in natural history papers should use the aligned-couplet form for zoology and may use the multi-level indent form for botany. If cross referencing is required between key and text, do not include page references within the key, but number the keyed-out taxa, using the same numbers with their corresponding heads in the text.

Synonymy in zoology must use the short form (taxon, author, year:page), with full reference at the end of the paper under "Literature Cited." For botany, the long form (taxon, author, abbreviated journal or book title, volume, page, year, with no reference in "Literature Cited") is optional.

Text-reference system (author, year:page used within the text, with full citation in "Literature Cited" at the end of the text) must be used in place of bibliographic footnotes in all Contributions Series and is strongly recommended in the Studies Series: "(Jones, 1910:122)" or ". . . Jones (1910:122)." If bibliographic footnotes are required, use the short form (author, brief title, page) with the full citation in the bibliography.

Footnotes, when few in number, whether annotative or bibliographic, should be typed on separate sheets and inserted immediately after the text pages on which the references occur. Extensive notes must be gathered together and placed at the end of the text in a notes section.

Bibliography, depending upon use, is termed "Literature Cited," "References," or "Bibliography." Spell out titles of books, articles, journals, and monographic series. For book and article titles use sentence-style capitalization according to the rules of the language employed (exception: capitalize all major words in English). For journal and series titles, capitalize the initial word and all subsequent words except articles, conjunctions, and prepositions. Transliterate languages that use a non-Roman alphabet according to the Library of Congress system. Underline (for italics) titles of journals and series and titles of books that are not part of a series. Use the parentheses/colon system for volume (number): pagination: "10(2):5–9." For alignment and arrangement of elements, follow the format of recent publications in the series for which the manuscript is intended. Guidelines for preparing bibliography may be secured from Series Section, SI Press.

Legends for illustrations must be submitted at the end of the manuscript, with as many legends typed, double-spaced, to a page as convenient.

Illustrations must be submitted as original art (not copies) accompanying, but separate from, the manuscript. Guidelines for preparing art may be secured from Series Section, SI Press. All types of illustrations (photographs, line drawings, maps, etc.) may be intermixed throughout the printed text. They should be termed **Figures** and should be numbered consecutively as they will appear in the monograph. If several illustrations are treated as components of a single composite figure, they should be designated by lowercase italic letters on the illustration; also, in the legend and in text references the italic letters (underlined in copy) should be used: "Figure 9b." Illustrations that are intended to follow the printed text may be termed **Plates**, and any components should be similarly lettered and referenced: "Plate 9b." Keys to any symbols within an illustration should appear on the art rather than in the legend.

Some points of style: Do not use periods after such abbreviations as "mm, ft, USNM, NNE." Spell out numbers "one" through "nine" in expository text, but use digits in all other cases if possible. Use of the metric system of measurement is preferable; where use of the English system is unavoidable, supply metric equivalents in parentheses. Use the decimal system for precise measurements and relationships, common fractions for approximations. Use day/month/year sequence for dates: "9 April 1976." For months in tabular listings or data sections, use three-letter abbreviations with no periods: "Jan, Mar, Jun," etc. Omit space between initials of a personal name: "J.B. Jones."

Arrange and paginate sequentially every sheet of manuscript in the following order: (1) title page, (2) abstract, (3) contents, (4) foreword and/or preface, (5) text, (6) appendixes, (7) notes section, (8) glossary, (9) bibliography, (10) legends, (11) tables. Index copy may be submitted at page proof stage, but plans for an index should be indicated when manuscript is submitted.